

Transportation
Library

40 F

JAN 23 '56

JANUARY 1956

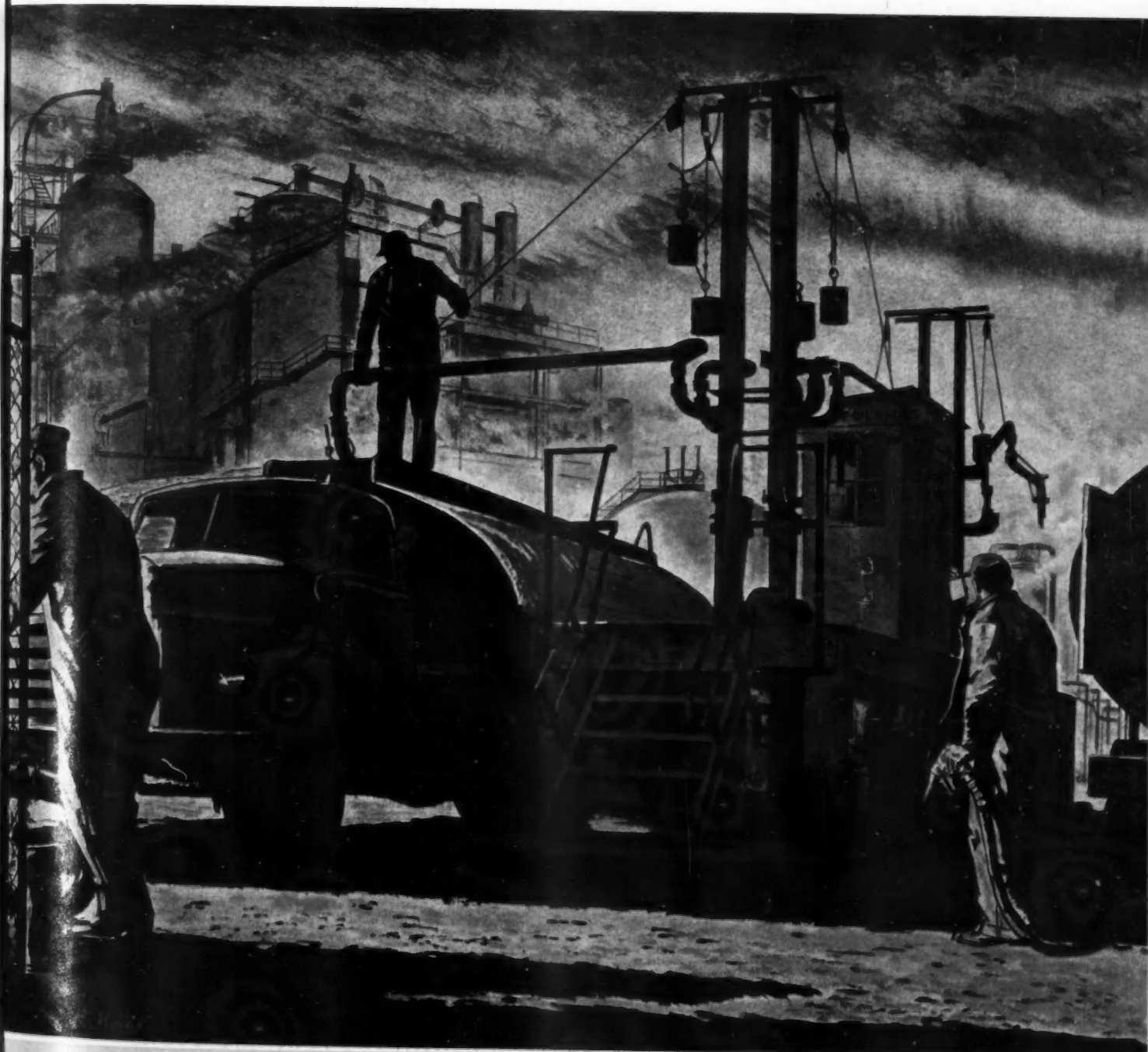
COMMERCIAL CAR JOURNAL

A CHILTON PUBLICATION

JAN 23 1956

TRANSPORTATION
LIBRARY

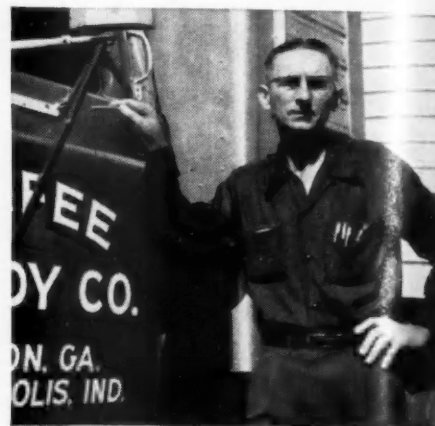
THE MAGAZINE FOR TRUCK AND BUS FLEET OPERATORS



in this issue

Agreed Charges, Menace to Truck Operators
Automation in Shop Records
Back to School at N. Y. Omnibus

**"4,000 pounds
more payload in
our Dodge trucks!"**



**Says B. L. Byrd, Traffic Manager
McAfee Candy Company
Macon, Georgia**



"Our Dodge trucks are hauling up to 4,000 lbs. more payload than the trucks they replaced. What's more, our Dodges haul these bigger loads in as good, or better, time. On our tough runs, over the mountains, Dodge trucks cut our hauling time considerably.

"And we get better gas mileage than in our previous trucks. Our drivers like Dodge, too. You'd have a hard time getting them to trade Dodge for any other make."

Often, Dodge tractor-trailer units in the McAfee fleet haul 36,000-lb. payloads on weekly trips of 2,400 miles to the North and to the Southwest . . . through some of America's hilliest country. This company demands top performance from its trucks—and gets it, day after day, month after month, with Dodge!

You, too, will haul bigger loads, cut fuel costs, and save trip time with Dodge "Job-Rated" trucks in your fleet. And, you'll benefit from prices that are down with the lowest! See your Dodge dealer soon.

DODGE
Job-Rated
TRUCKS

WITH THE FORWARD LOOK



COMMERCIAL



In a Class by Themselves
Bodies that "Pay for Themselves thru Savings!"

ALUMINUM ALLOY



BODIES BY *Grumman*

FREE BOOKLET: "Golden Economies in Route Deliveries"
 at your Chevrolet, Ford or GMC Dealer or on request to
 J. B. E. Olson Corporation, 1740 Broadway, New York 19, N. Y. Tel.: Columbus 5-4300



COMMERCIAL CAR JOURNAL

EDITORIAL STAFF

Charles Bartlett Rawson, Editor

Murray K. Simkins.....Managing Editor
Ernest S. Forest.....Associate Editor
Jack Colgan.....Special Features Editor
Joseph Geschelin.....Detroit Tech. Editor

Leonard Westrate....Detroit News Editor
R. Raymond Kay.....Pacific Coast Editor
Howard Kohlbrenner.....Art Director
George Baker, Ray M. Stroupe, Neil R. Regeimbal.....Washington News Editors

Marcus Ainsworth.....Statistician
Paul Wooton.....Washington Member
of the Editorial Board

THIS MONTH'S FEATURES

Agreed Charges, Menace to Fleetmen 66

Former ICC Commissioner Knudson warned about them at the ATA Convention. Based on Canadian experience, here's what you can expect if they are permitted in the U. S.

Rubber-Tired Pipe Lines 69

You depend on about 200,000 private carrier trucks, over 15,000 for-hire tank trucks for your petroleum products.

Back to School at New York Omnibus 70

Chief Engineer Moreland tells how in-service training of foremen and supervisors cuts bus fleet maintenance costs.

Weigh 'Em on the Go 72

Electronic "load cells" set in the highway spot only overweight trucks, let the legal loads continue on their way.

Multi-Purpose Greases Slick-Up Service ... 74

They reduce chances of using wrong type, cut lube time, often perform better than specialized ones they replace.

Portable Rig Speeds Reefer Service 76

Spector saves shop space and mechanics' time, ups trailer utilization with equipment mounted on an old truck chassis.

Micro-Siping Tires Improves Safety 78

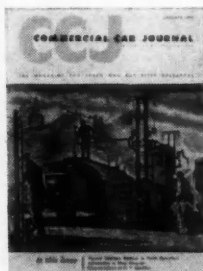
O. E. Johnson cross-cuts tires under simulated load conditions, reports that it improves wear, results in better road gripping ability without sacrificing life factor.

Automation for Shop Records 82

With less paper work and more clerical productivity, it can help spot maintenance jobs before they're big and costly.

DEPARTMENTS

ON THE COVER . . .



Vital links in the petroleum industry's distribution system, tank trucks now handle nearly all short-haul deliveries and a steadily increasing portion of crude and processed petroleum. With domestic demand for petroleum now at about three billion barrels a year, trucks have a big job to do, earning them the feature spot on this month's cover and a salute which begins on page 69.

The Overload	5
At Your Service	9
Up Front with CCJ	17
Dates and Doings	22
Bulletin Board	62
Laugh It Off	64
Shop Hints	80
New Product Descriptions	84

BPA

NBP

COMMERCIAL CAR JOURNAL

with which is combined Operation & Maintenance

Reg. U. S. Pat. Off.

Member B.P.A.

RUSSELL W. CASE, JR., Publisher

E. H. MILLER, Adv. Mgr.

E. W. HEVNER, Cir. Mgr.

C. W. HEVNER, Asst. to Publisher

JOHN W. FLOOD Research

COMMERCIAL CAR JOURNAL is published monthly by Chilton Co., N. W. Cor. Chestnut & 36th Sts., Philadelphia 39, Pa. Subscription price: United States and Possessions, \$3.00 per year; all other countries \$10.00 per year. Single copies 50¢, except Apr. and Nov.—\$1.00. Accepted under controlled circulation at Philadelphia, Pa.

REGIONAL MANAGERS

R. J. BIRCH, San Francisco
GORDON A. BRAUNINGER, Dallas
ROBERT N. CAIRD, JR., New York City
E. E. ELDER, Detroit
L. H. JACKSON, Los Angeles

J. A. LAANSMA, Detroit
FRANK W. MCKENZIE, San Francisco
CURTIS F. MOSS, Chicago
WILLIAM P. SAUNDERS, Cleveland
H. M. WERTZ, Chicago

OFFICES

Philadelphia 39, Pa.—Chestnut & 36th Sts., Phone SHerwood 8-2000
Chicago 1, Ill.—360 North Michigan Ave., Phone FRanklin 2-4213
Cleveland 14, Ohio—730 National City Bank Bldg., Phone CHerry 1-4188
Dallas 18, Texas—8357 Eustis, Phone DAvis 7-4176
Detroit 2, Mich.—1015 Stephenson Blvd., Phone TRinity 5-2090
Los Angeles 5, Cal.—3156 Wilshire Blvd., Phone DUinkirk 7-2119
New York 17, N. Y.—100 East 42nd St., Phone OXford 7-3400
San Francisco 4, Cal.—300 Montgomery St., Phone DOuglas 2-4303
Washington 4, D. C.—1091 & 1093 National Press Bldg., Phone EXecutive 3-9474

COMMERCIAL CAR JOURNAL, January, 1956

AR JOURNAL

Statistician
Member
ial Board
vs Editors

JANUARY, 1956 VOLUME 90, No. 5
Copyright 1956 by Chilton Company (Inc.)

... 74	GMC Shows New Tractor Air Suspension...	90
	Also on display at Chicago Show are a new wide-range, one-shift transmission and harmonic damper for front wheels.	
... 76	Truck and Trailer Lighting Standards	92
	ATA Equipment and Maintenance Council's recommended specifications for wiring, candlepower and lamp locations.	
... 78	Hercules OHV Engines	94
	Permacel's Body Repair Tape	94
... 82	Fruehauf-PIE Tank Truck	96
	Clayton's Exhaust-Burning Muffler	96
	American Bosch Gasoline Injection System..	148
	Don't Overpay Your Taxes	194
	Detachable Axle Boosts Payload	194

ENTS

... 5	Fleetman's Library	88
... 9	January News Roundup	98
... 17	New Truck Registrations	100
... 22	Introducing	154
... 62	Fleet Notes	160
... 64	Safety Awards	162
... 80	Factory Flashes	164
... 84	Among the States	168



One of the Publications Owned by
CHILTON COMPANY (INC.)
Chestnut and 56th Streets, Philadelphia 39, Pa., U. S. A.

Officers and Directors

JOSEPH S. HILDRETH, *Chairman of the Board*
G. C. BUZBY, *President*

Vice-Presidents

P. M. FAHRENDORF	HARRY V. DUFFY
WILLIAM H. VALLAR, <i>Treasurer</i>	JOHN BLAIR MOFFETT, <i>Secretary</i>
GEORGE T. HOOK	ROBERT E. McKENNA
L. V. ROWLANDS	IRVING E. HAND
MAURICE E. COX	EVERIT B. TERHUNE, JR.
FRANK P. TIGHE	RUSSELL W. CASE, JR.
JOHN C. HILDRETH, JR.	

San Francisco
go
S, Cleveland

8-2000
2-4213
ry 1-4188

2090
2119
3400
2-4393
Executive 3-3474

January, 1956

COMMERCIAL CAR JOURNAL, January, 1956

Portrait
of a
truck
making
a left
turn



(one mile away)

When the car behind
can't see anything
else, he'll spot
a gleaming Yankee
turn signal lamp.

for safety's sake...
make it



Yankee offers you 36 different sets of Class A Type I
Truck Turn Signals...the world's most complete line.
Send for complete catalog of fleet safety accessories.
YANKEE METAL PRODUCTS CORP., Norwalk, Conn.



Low cost
Thin-A lamps



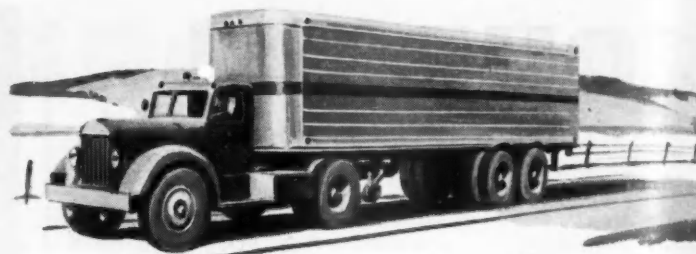
Heavy duty
reflector
type lamps



Low maintenance
sealed beam
lamps

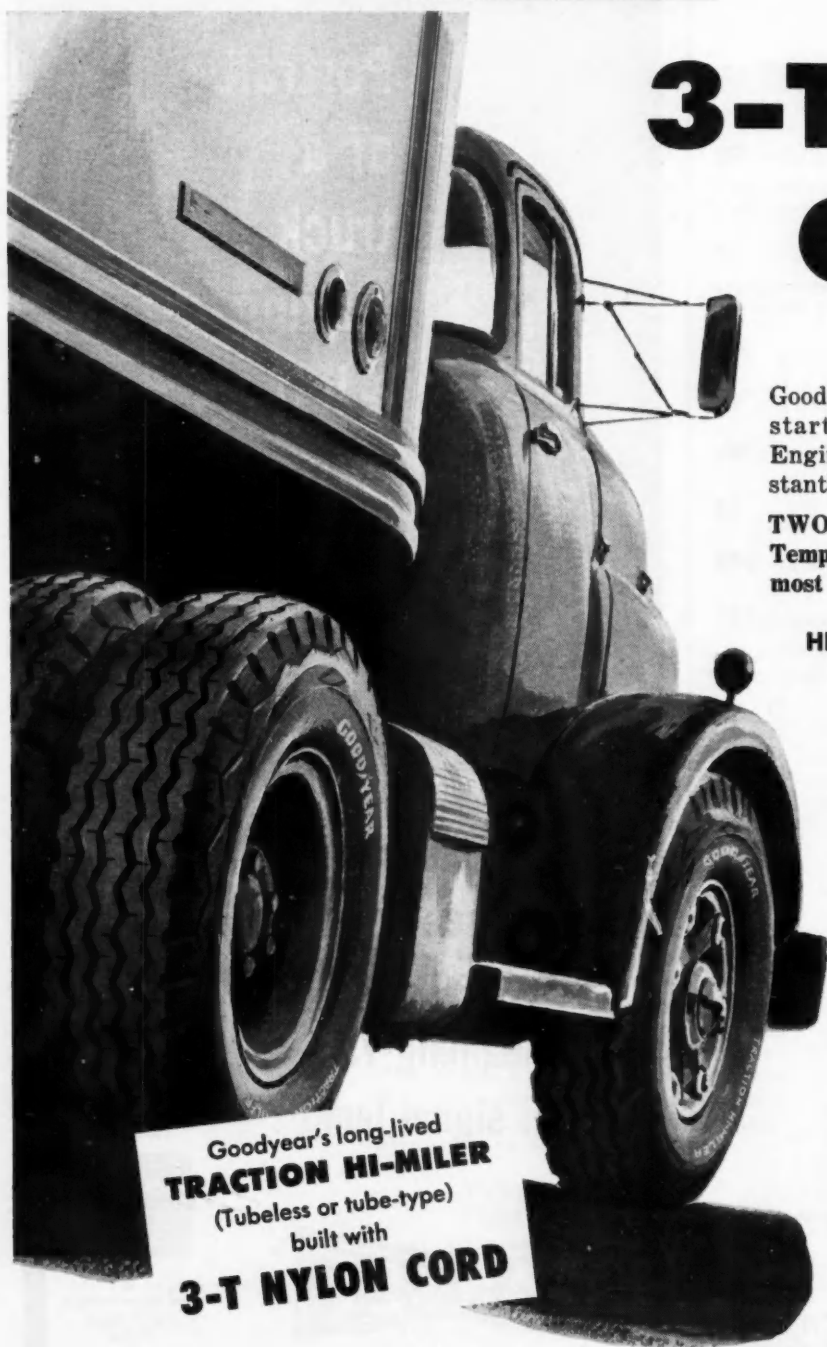
First in Nylon—

(BACK IN 1947, Goodyear announced the world's first Nylon cord truck tires)



and still foremost because of

3-T NYLON CORD!



Goodyear's long-lived
TRACTION HI-MILER
(Tubeless or tube-type)
built with
3-T NYLON CORD

Goodyear has made good use of its several years' start on the industry. Goodyear Development Engineers have been working far ahead—constantly improving Nylon cord—

TWO YEARS AGO, Goodyear announced Triple-Tempered 3-T NYLON CORD—toughest, most durable, most stable Nylon cord ever to go into any tire!

HERE'S WHAT THE TRUCKERS SAY ABOUT IT:

"Excess stretch, ply separation, flex failure—practically ended!"

"Bruise-breaks, heat blowouts—cut to just about zero!"

"Up to 30% more service, many more recaps—because 3-T CORD bodies are so astonishingly durable!"

"Fewer road delays, lowest tire-cost-per-mile!"

You get Triple-Tempered 3-T NYLON CORD in Goodyear tires **ONLY**—and it costs you no more than ordinary Nylon cord found in other tires.

Doesn't it stand to reason that you'll be better off if you specify the name that's **FIRST** and **FOREMOST** in the Nylon truck tire field?

Goodyear, Truck Tire Dept., Akron 16, Ohio

Hi-Miler—T. M. The Goodyear Tire & Rubber Company, Akron, Ohio

Buy and
Specify

GOOD YEAR



Look for this sign; there's a
Goodyear dealer near you.

MORE TONS ARE HAULED ON GOODYEAR TRUCK TIRES THAN ON ANY OTHER KIND

The

OVERLOAD

E D I T O R I A L C O M M E N T

Four Hundred Ride in Modern Safety Brigade

LAST month we welcomed the opportunity of spending two working days with members of the four-state cooperative highway safety patrols operating in Pennsylvania, Ohio, Indiana and Michigan. These men are not appointed by Presidents or Governors, nor do they often make front page news. Yet they are in the very front line of the truck industry's continuing fight against death, injury and destruction on the highway.

As they worked together—comparing notes, exchanging ideas, improving techniques—we could not help but wonder how much, or probably how little, their work is understood by the leaders of the very industry they serve with such devotion. CCJ told part of the story soon after the patrol idea got started in Pennsylvania (June, 1953) but results since then are impressive.

In a nutshell, virtually all of the four hundred men who make up the active patrols are employed as safety supervisors by truck lines or insurance carriers. Their primary job is to observe, report and take corrective action on the behavior of vehicles and drivers under their direct control.

But beyond this primary call of duty the group has banded together to report on *all* vehicles which they encounter on the highway. Thus each greatly expands his own sphere of influence and carriers everywhere, large and small, "for hire" and private, benefit from the cooperative venture.

During 1955 the group made approximately 25,000 reports. These were funneled through association headquarters in each of the four states, ended up on the desks of trucking executives in all parts of the country. There is indication that most were well received.

Many of the reports were highly favorable and this is important as a means of gaining

the confidence of both drivers and company officials. These good reports stymie once and for all the idea that anybody is out to "get" anybody else.

Others, of course, are not so favorable, give quick indication that the patrol is doing a needed job—and well. It is unfortunate that the greatest number of these concern over-speeding in one form or another. (And every one is backed up by a calibrated speedometer, one of the cardinal rules of the cooperative patrols.) Others concern improper passing, tailgating and improper lights, in just about that order, plus a long list of other minor and major discrepancies.

While each report has its own specific mission, it is important to remember that a summary of all reports can in no way reflect a true picture of over-all commercial vehicle behaviour. It is only human nature to pay stricter attention to the bad than to the good. But they do provide valuable keys to needed corrective action.

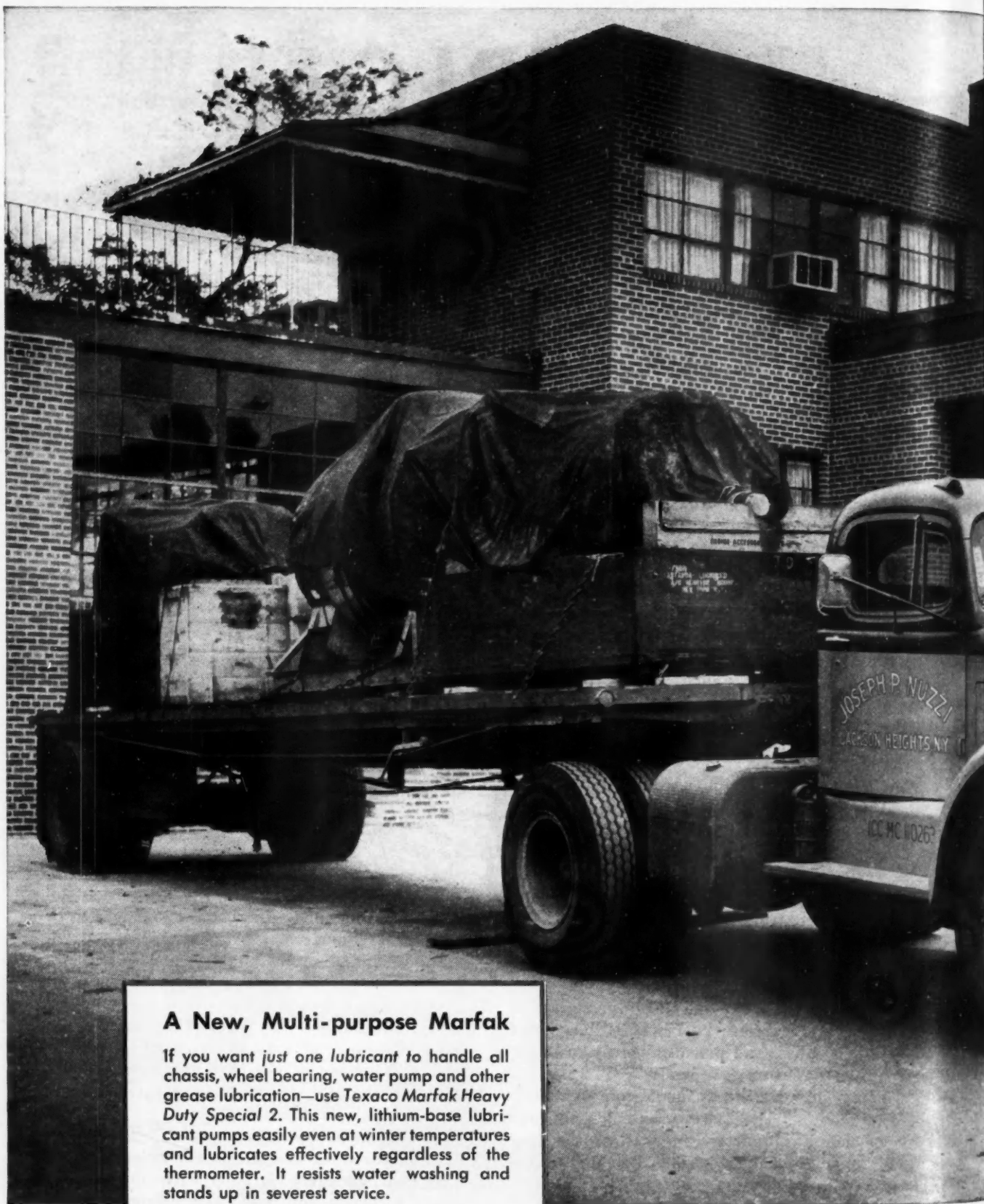
Years ago we made a statement here that we hoped we would live long enough to see the day when the word "Overload" would be known *only* as a copyrighted feature of COMMERCIAL CAR JOURNAL. Already we have lived long enough to see the abuse greatly reduced.

Now it is our ardent hope and wish for the new year that we may all quickly see the day when improper actions of any kind pass from the trucking scene. For then and only then can the trucking industry make its greatest contribution to highway safety.

Until that happy day, a special salute to the four hundred—a modern safety brigade. May they continue their vigilance with courage and great accuracy and may their cooperative efforts be received in the true spirit in which they are offered.

Bart Rawson

Editor



A New, Multi-purpose Marfak

If you want *just one* lubricant to handle all chassis, wheel bearing, water pump and other grease lubrication—use *Texaco Marfak Heavy Duty Special 2*. This new, lithium-base lubricant pumps easily even at winter temperatures and lubricates effectively regardless of the thermometer. It resists water washing and stands up in severest service.



TEXACO

CC



QU

gine
sisto
ance
plug
near
with
diff
resi

T
spa
is t
resi
ren
resi
also
val
sion
The
the
str
los
can

7
wit
for
sis
can
fa
pe
tri

T
ba
gi
cl



At Your Service

TIMELY NOTES ON MAINTENANCE AND OPERATION

by MURRAY SIMKINS Managing Editor

Concerning Resistors

QUESTIONS frequently arise concerning the effect of radio suppression resistors on engine performance. One reason is that a resistor causes a visible difference in the appearance of the spark that results when a spark plug wire is removed from the plug and held near the engine. Also, the reading obtained with some ignition testing devices is noticeably different after a vehicle is equipped with radio resistors.

The ignition voltage available to fire the spark plugs is not affected by suppressors. This is true because no current flows through the resistor until the plug fires, and when no current flows there is no voltage drop across a resistor. The voltage required to fire the plugs also is unaffected by suppressors since the value is determined by the plug gaps, compression pressure, carburetion, and other factors. Therefore, suppressors do not cause failure of the spark to occur. This fact has been demonstrated in tests made with a cathode ray oscilloscope by means of which ignition voltages can be measured accurately.

Tests made on the same engines with and without suppression resistors indicate that performance and economy are not affected. Resistors that have become defective, however, can cause engine malfunction. Resistors can fail by becoming open-circuited. If this occurs, performance will be affected.—From Sun Electric Corp. and Delco-Remy.

Carburetor Air Cleaner Neglect

THERE have been some reports of a hesitation or surge encountered on 1955 Studebaker passenger cars equipped with V-8 engines and standard or dry type carburetor air cleaner. The condition is most noticeable at

approximately 15 mph when the car seems to hesitate and then lunges ahead on light acceleration. The car's performance is much the same as would be encountered with a clogged carburetor accelerating pump jet and is sometimes diagnosed as such.

Studebaker checks traced the cause to the carburetor air cleaner filter element. Normal engine operation was completely restored with the installation of a new filter element in air cleaner. The filter element had been in use well over 10,000 miles. It had been removed and shaken out at regular intervals, but was clogged to a point where it prevented a free flow of air.

Factory tests show that with a dirty filter element the mixture in the carburetor is enriched approximately 20 per cent at engine speeds below 1600 rpm and from 5 per cent to 10 per cent richer at higher engine speeds.

Hydrometers and Voltmeters

TWO types of testers are suitable for testing batteries—voltmeters and hydrometers. Although they differ considerably, either, when used properly, will do an adequate job of determining the state of charge and condition of the battery. (Some fast chargers are equipped with testers that place a current drain on the battery that approximates that of the starter. These testers give an accurate test of battery condition but can only be used after the battery has been *fully* recharged.)

The state of charge and condition of a battery is indicated by the strength of the acid in the cells. In a fully charged battery the acid is at maximum strength. As the battery is discharged, acid combines with the plates and the amount in the solution becomes less and less. State of charge, therefore, can be obtained
(TURN TO PAGE 10, PLEASE)



At Your Service

Continued from Page 9

accurately by measuring the strength of the acid solution.

Condition can be determined accurately by measuring the difference in the strength of the acid solution in the battery's cells. A hydrometer measures the strength of the acid solution by comparing its weight with that of water. The readings obtained are given in terms of specific gravity, i.e., 1.150, 1.220, etc.

The state of charge and condition of a battery is also indicated by the electrical voltage of the cells. Therefore, by reading the voltage of cells on open circuit, i.e., when they are not delivering current, it is possible to determine their state of charge and condition. If the battery has been charged during the previous 12-24 hours, by the generator for example, state of charge readings will be falsely high due to

what is known as "surface charge." Most tester instructions call for the car lights to be turned on for a short period of time to remove the "surface charge" but, since there are varying degrees of "surface charge," the test is not very accurate. (Exide voltmeter type testers have a patented scale and test procedure that gives greatly improved accuracy.) Voltmeters give an accurate test for condition, since cell differences are not affected materially by "surface charge."—from Exide news.

Cummins Main Bearing Work

HERE is the sequence for tightening late Model No. JS-600 and JBS-600 Cummins diesel engine main bearing caps for checking or installing shafts as outlined by a member of the Automotive Engine Rebuilders Assn.

Cap and block surfaces must be cleaned to insure good metal-to-metal contact. Cap nuts should be checked for good thread fit to prevent any pulling action. Caps must be checked and, if necessary, built up to insure snug fit between case and cap.

With lock washers in place, all nuts are tightened to 160 ft lb, then completely loosened and re-torqued to 35 ft lb. Then, using template method, each nut is turned 60 deg. If case is not marked as is the case many times,

(TURN TO PAGE 12, PLEASE)

More than a Recap!

HAWKINSON TREADS *Because*

- RUN COOLER • LAST LONGER
- GIVE BETTER TRACTION
- BETTER CAR PERFORMANCE

CURED THE WAY THEY RUN

A TREAD TO SUIT YOUR NEEDS

AUTHORIZED HAWKINSON TREAD SERVICE

Authorized HAWKINSON TREAD Service

In Principal Cities U. S. A., Canada and Foreign Countries

Minneapolis • PAUL E. HAWKINSON CO. • Minnesota



DRIV
smot
shap
FLE
happ
any
Dep
Sim

COMMERC



"They're for specifying full-depth Airfoam seats, Boss. First time you ever saved a buck — and gave us drivers a break!"

DRIVERS LOVE AIRFOAM because it cradles every contour, smothers the bumps, keeps them comfortable, cool — in better shape to do a better job.

FLEET OWNERS LOVE AIRFOAM because it helps keep drivers happy, more alert, and helps keep costs in line—far outlasting any other type cushioning. Goodyear, Automotive Products Dept., Akron 16, Ohio.

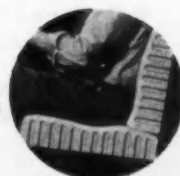
Simply specify **FULL-DEPTH**



Airfoam MADE ONLY BY **GOOD YEAR**
The World's Finest, Most Modern Cushioning

You can get full-depth AIRFOAM

SEATS



and BACKS

in any original equipment!

Airfoam—T. M. The Goodyear Tire & Rubber Company, Akron, Ohio



At Your Service

Continued from Page 10

one hex on the nut is equal to a 60 deg. turn.

If checking the main bearing-case bore size, it should be 4.1245 plus .0005 in. A long straight edge will give you a good idea if there is case warpage. However, the only sure check is with proper size plug gage. If variance in bore size is found, you may be assured there is some case warpage. To correct warpage, the case itself must be align-reamed—not the bearings.

In case of laying the shaft, the shaft will turn completely free with this method. Particular attention must be paid to thrust washer dowel pins. Under no circumstances should washers bottom on dowel pins. A 1/32 in. to 1/16 in. clearance is preferred. If washers bind on shaft, it will cause overheating and seizing

of the rear main bearing and motor failure.

If case is tightened with this procedure, you should eliminate any main bearing trouble with this engine.

Ringsby Saves Fuel

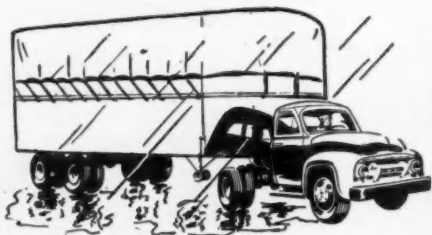
A FUEL Mileage Champion Driver Program instituted by Ringsby Truck Lines has shown some outstanding results. Here's what the fleet reports: 23 per cent more fuel mileage, 42 per cent less tire wear, 31 per cent less brake wear, 40 per cent less radiator, spring, cab and frame repairs, and 28 per cent decrease in accident frequency.

Drivers getting the best fuel mileage each month in their respective divisions earn the honor of flying two distinctive Orange and Black pennants over their truck cab for the month; and, in addition, each of the two drivers on that truck are presented with 1000 extra prize points on the company Sights on Safety Safe Driving Prize Award program.

Keynote of the plan is the ever present incentive for each driver to "Keep my foot out of the pump."

Accurate fuel and mileage records are posted monthly, establishing the winners and those placing 2nd, 3rd, etc.

Mechanical perfection of the truck is, of
(TURN TO PAGE 14, PLEASE)



EVEN THE BEST CAN BE IMPROVED...

NOW...A TARPAULIN THAT'S LIFETIME WATERPROOF!

NEW JATON[®]+VINYL

A Lightweight Tough Vinyl Impregnated Cotton Canvas for tough requirements wherever protective coverings are used!

Thorough vinyl impregnation brings increased strength and all weather protection to Jatons' outstanding qualities.

COMPLETELY WATERPROOF...WEATHERPROOF...FIREPROOF

- Not merely water-repellent... absolutely watertight! 2400% more water-resistant than U. S. Gov't specifications require.
- Designed for outdoor durability... retains waterproof qualities and flexibility permanently and under all climatic conditions ● Will not support combustion.

LOW IN COST... lower in price than coated synthetic fabrics.
Available in colors in various weights from 6 oz. to #4 duck.

Write or phone for complete information, samples and prices.

MARINE CANVAS SUPPLY CORPORATION

MAKERS of WATERPROOF and FIREPROOF CANVAS SINCE 1920



Dept. B. 700-706 COURT ST., BROOKLYN 31, N. Y.

MAin 5-0100

OUT OUR WAY

by J. R. Williams



MORE MILEAGE—MORE RECAPS—REGULAR PRICE

Lee Super DeLuxe Highway Tire has many premium features

Never has there been a regular-price tire with so many premium features!

You get extra mileage because the tread, compounded of the best grade Smoked Sheet natural rubber, is flat in contour to distribute the load. The tread design is deep cut, too, for extra traction. And because the center grooves are angular, cuts won't grow into long tread cracks. Then there are buttresses in the tread grooves specially designed to give extra support and to eject small stones.

All cords are treated by Lee's exclusive Flexlok process, which reduces heat, minimizes tire growth, and makes cord

separation practically impossible. The carcass features Lee Lubri-Cushions—thin sheets of rubber between every ply. They lubricate the plies, reduce internal friction, and protect against bruise breaks.

The Lee Super DeLuxe Highway Tire is available in Double-Life rayon or nylon cord. It is an outstanding truck tire buy.

* * *

The complete Lee line, shown below, includes a tire which will lower *your* operating costs by giving longer life, more recaps. Let us prove it to you.



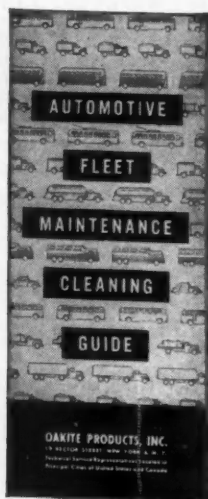
Complete Guide to

Low-Cost

Fleet


Maintenance

Cleaning!




Once you've thumbed through this handy cleaning guide, you're certain to be referring to it time and time again. Complete in every respect, it gives you workable knowledge on practically every phase of automotive fleet maintenance cleaning. Presented in easy-to-read tabular form are specific cleaning procedures for each type of soil and surface—the most effective detergents to use; the proper concentrations; the best working temperatures. Included are comprehensive suggestions for performing many important maintenance jobs such as:

 Block and engine cleaning

 Body washing

 Carburetor cleaning

 Paint stripping

 Radiator reconditioning

 Rust prevention

 Floor cleaning

This valuable reference guide is yours FREE, with no obligation. For your copy, contact your local Oakite Technical Service Representative today, or write Oakite Products, Inc., 36D Rector St., New York 6, N. Y.

SPECIALIZED INDUSTRIAL CLEANING
OAKITE
INC. 40 E. PALM ST.
MATERIALS • METHODS • SERVICE

Technical Service Representatives in Principal Cities of U. S. and Canada



At Your Service

Continued from Page 12

course, another coveted aim. Driver-Shop co-operation has improved tremendously. Drivers write up in intelligent detail in their equipment logs any possible defects in their equipment and further discuss these problems with the maintenance foremen to assist in any way possible to keep their unit in top condition.

Excess exhaust smoke is practically a thing of the past. Smoke caused by drivers "pushing" the engine has practically disappeared because of this new incentive. If a mechanical defect or adjustment needs attention, the drivers and shop share a mutual sincere and enthusiastic interest to eliminate such fuel waste and inefficiency.

Servicing Generator Regulators

THE following important precautions should be taken, to prevent any damage to the regulator when servicing the generating system:

Always disconnect the battery lead at the regulator terminal, before removing generator regulator cover, or disconnecting the field or armature wires. Be sure to prevent lead from shorting.

When connecting test equipment leads, be sure the test lead clips are properly attached to the terminals and are not grounded against the base or cover of the regulator. Do not polarize the generator by using a jumper wire from battery terminal (Bat) to the field terminal (Field). To polarize the generator the ignition switch must be off. Then disconnect the battery lead, and then the field lead from the regulator. Then momentarily contact these two leads together. (This method of polarizing does not apply to any other American passenger car than Ford, Lincoln or Mercury.)—From Sun Electric and Ford.

Transmission Reconditioning

EXPANSION of its transmission reconditioning services to include manual-shift as well as torque converter units is announced by Trans-Main division, R. D. Fageol Co., Kent, Ohio. The company will now be able to handle virtually every type and make of bus and truck transmission. In some cases, replacement units can be furnished for operators' use while reconditioning is in process.



JANUAR



UP FRONT

WITH CCJ

JANUARY, 1956, FLEET HIGHLIGHTS AS REPORTED BY COMMERCIAL CAR JOURNAL

MR. EXECUTIVE, At press time it was anybody's guess as to what the next move on the ICC Emergency Brake Regulations would be. In late December, the situation lined-up like this: In briefest form the ICC proposal (Dec. '55, page 70) called for (1) axle-by-axle protection, (2) brakes under driver's control by foot or trailer hand valve, (3) automatic application in event of air pressure failure—mandatory on trailer and optional on tractor. Effective date for new vehicles is Sept. 30, 1956, and for old vehicles, March 31, 1957. Both AMA (representing truck makers) and TTMA (representing trailer builders) were standing pat. Jointly they had recommended the basic elements of the proposal to ICC, were not in a position to enter complaints. But both listened intently for reaction of individual members, particularly as the complexity and cost of the proposal filtered down to member level.

TRUCK USERS as represented by ATA were somewhat in the position of a Johnny-come-lately. While ATA staffers had sat in on pre-proposal discussions and a handful of truck operators had seen the emergency brake displays at the ATA annual convention, most were not prepared for the full impact of the provisions. But it is the operators who will pay the bill, make field installations. They must fight for the modification deemed necessary or practical. At December's end, ICC had extended the deadline for written comment until Feb. 3 at request of ATA and Fawick Corp.'s Brake Division. Since announcement of the regs, ATA has been consolidating suggestions from its conferences, is likely to submit specific requests to modify the rules to permit vehicle-by-vehicle protection—at least on older vehicles. Complexity of field installations with resultant danger of improper operation appeared to be the most critical item.

TRANSPORT POLICY legislation should be considered by the Senate Commerce Committee within a month or six weeks after Congress convenes, says Senator Bricker. Transportation users as represented by the National Industrial Traffic League at its annual meeting opposed several of the rate recommendations of S1920, the enabling legislation (Sept. '55, page 74), as have the Southern Traffic League and the Atlanta Freight Bureau. ICC's views on S1920, contained in a report to the Congressional committees involved, approved the idea of competition in transportation but cautioned against too great a removal of restraints. General view was that the transport revision proposals as a package stood little chance in this session of Congress, but if they were split into several bills, there would be a chance of enactment of those provisions where there was a large measure of agreement among the various carriers and shippers.

DETROIT DISPATCH

A SHORTAGE OF 100,000 automotive mechanics exists in this country today. This was the challenge presented members of the American Vocational Assn. at their recent convention. It was brought out in a panel discussion sponsored by the National Standard Parts Assn.

NEW "TYPE C" AUTOMATIC transmission oil mentioned here last month is being used by GMC on Hydra-Matic transmission trucks leaving the production line. GM recommends that fleet operators do not mix either "C" and "A" or brands of "C" when make-up oil is needed. The new oil is a good grade of mineral oil, costs less than half as much as type "A."

CHEVROLET WILL offer a new torque converter-type transmission and a

larger displacement V-8 engine in a new 19,500 lb GVW model to be announced soon. Supplied by GM's Allison Division, the transmission has a torque converter coupled to a 6-speed gear box, features an hydraulic retarder for downhill braking.

GASOLINE PRICE WARS COULD bring federal regulation said Senator Humphrey during a Senate small business subcommittee probe of gasoline price wars in New Jersey. Major refiners appearing before the committee opposed the idea.

BALL JOINT SUSPENSION, POPULAR on passenger cars, is a possibility for trucks with up to 10,000-lb front axle loadings. A major supplier has developed a "package" unit to be offered to truck makers. It consists of

WASHINGTON RUNAROUND

HIGHWAY PLANS WILL probably be among the first highway user items to be debated on the floor of Congress—after many committee meetings and hearings. Faced with as many as 30 proposals (Dec. '55, page 17), good bet for fleet operators would be to compromise individual differences and unite to promote the best all-around plan. Inside and outside of Congress, there was increasing support for the idea that the highway bill should outline only the plan and amounts needed, leaving to the House Ways and Means Committee the problem of financing through increased taxes, bond issue or both.

AMERICAN ASSN. OF State Highway Officials at its annual meeting early in December voiced objection to a hard and fast 10 or 15 year program. They approved the idea of an overall program of not more than 15 years to finish the Interstate System but said, "The initial appropriation should be for a period of five years." Added AASHO: Such funds "... should be initially apportioned on a basis of need ... and as indicated by future successive needs estimates ; such succes-

sive estimates to be made first in 1957 and in five-year intervals thereafter."

SUNSPOTS ARE going to give mobile radio users trouble during the next three years, reaching a peak during the winter of 1957-58. Worst interference will be in the 25-50 mc band.

SUIT BY 37 fleet operators and Pennsylvania Motor Truck Assn. against major eastern railroads and the public relations firm of Carl Byoir & Associates is scheduled for trial in October this year. There will be a pre-trial hearing Jan. 27 in an attempt to more sharply define the issues in the \$250 million treble-damage lawsuit. Possibility is that the case may be settled before the October trial date.

RECIPROCITY BREAKDOWN STEM-MING from Ohio's axle-mile tax (Dec. '55, page 20) is spreading. Missouri has cancelled reciprocity agreements on fees with Oklahoma and Illinois effective Jan. 15. Reason is the two states are charging Missouri trucks "identification" fees. Meanwhile Indiana Motor Truck Assn. on behalf of its members plans suit against Ohio

in. a
e an-
s Al-
has a
speed
ic re-

OULD
enator
l busi-
soline
or re-
mittee

PULAR
ity for
nt axle
as de-
be of-
sists of

first in
s there-

e mobile
he next
t during
interfer-
band.

d Penn-
against
e public
e Associ-
October
pre-trial
to more
the \$250
t. Possi-
e settled

STEM-
tax (Dec.
Missouri
reements
Illinois ef-
the two
ri trucks
hile Indi-
behalf of
inst Ohio

nuary, 1956

a complete front axle assembly which can be attached to chassis as a unit.

BOHN ALUMINUM AND Brass Corp., majority owner of Reo, is expected to make an offer to buy Diamond T Motor Car Co. assets soon. Bohn recently bought 87,000 shares of Diamond T (in addition to its previous 12 per cent holdings) which, together with 17,000 negative votes from other stockholders, was enough to block White Motor Co.'s bid for Diamond T reported last month.

POST OFFICE HAS ordered an added 2000 Dodge $\frac{3}{4}$ -ton mail trucks equipped with sit-stand controls. They have right-hand drive, automatic transmissions, roll-up rear doors, sliding side doors. Some commercial operators are reported interested.

to collect axle-mile tax payments made by its members during time Ohio-Indiana reciprocity pact was in effect.

"CAPTIVE" PIGGY-BACK HAS made its appearance on the New Haven Railroad. The carrier, a pioneer in carriage of truck line trailers, has signed interline agreements to provide "captive" service from points on its lines to points as far west as Denver, Colo. Rail-Trailer, middleman for Pennsylvania Railroad's truck line trailer service, and PRR have formed a new corporation to buy, own and rent to railroads flatcars for piggy-back service. Other railroads are expected to join in ownership of the company.

ICC'S NEW Managing Director Marion N. Hardesty has resigned effective Feb. 1. He will be on leave up to that time. New chairman of the Commission for 1956 is Anthony P. Arpaia, who succeeds J. Monroe Johnson. Johnson had announced his intention not to seek reappointment when his term as Commissioner expired end of last year, but has decided to stay on for at least three months, presumably at White House request.

BUSINESS TRENDS

General Freight Truck Tonnage

A **RECORD** year is in sight for truck freight as American Trucking Assn.'s Research Dept. reports 1955 third-quarter tonnage 15.4 per cent above third-quarter 1954. For October this year, tonnage was up 19.2 per cent over October, 1954, and 1.5 per cent over September, 1955. Ten-month totals showed greatest gain in the Central Region—up 19.1 per cent over 1954. The third-quarter index stood at 165 as compared to the previous high of 154 in 1953. Details of third-quarter truck tonnage appears on page 98, this issue.

Month	% Change from Previous Month	% Change from a Year Ago
October, 1955....	+1.5	+19.2
9 Months, 1955....	+14.0
September.....	+1.2	+17.0
August, 1955.....	+21.3	+20.9
July, 1955.....	-11.6	+8.7
6 Months, 1955....	+14.2
June, 1955.....	-0.9	+13.2
May, 1955.....	+0.2	+22.0
April, 1955.....	-5.0	+13.0
3 Months, 1955....	+12.2
March, 1955.....	+17.0	+13.0

Source: ATA Research Dept.

IN THIS ISSUE . . .

Find out how railroads can get as high as 80 per cent of your customer's freight with **AGREED CHARGES** (page 66), what a wonderful job **TANK TRUCKS** do in petroleum products distribution (page 69), how they separate the legal loads from **OVERWEIGHTS** without stopping the rigs (page 72).

Take a look at these **MAINTENANCE** cost cutters: Foreman and supervisor **TRAINING** does it at N. Y. Omnibus (page 70). An old truck chassis speeds **REEFER MAINTENANCE** at Spector (page 76). It can be done with **AUTOMATION** in handling shop records (page 82).

Review these reports on **MULTI-PURPOSE GREASES** (page 74), advantages of **TIRE SIPING** (page 78), ATA's new **VEHICLE LIGHTING** standards (page 92).

New Products described include GMC's **AIR SUSPENSION** and harmonic **SHOCK ABSORBER** (page 90), Hercules **OHV ENGINES** (page 94), Permacel's body repair **TAPE** (page 94), Fruehauf-PIE **TANK TRUCK** (page 96), Clayton's **MUFFLER** for reducing exhaust fumes (page 96), American Bosch's **GASOLINE INJECTION** system (page 148).

The Road Ahead



IN 1956, according to a U. S. Chamber of Commerce symposium on the business outlook, business will continue to expand and "... may well be our best year in history." Percentagewise, 1956 increases over 1955 may not be as great as 1955 over 1954, but business experts remain optimistic. The Chamber's Economist E. P. Schmidt sees little danger of inflation, forecasts only a 1 to 2 per cent increase in the consumer price index. For fleetmen, this means more freight since the amount of inflation will not cut seriously into purchasing power. For example, department store and specialty retail sales are expected to beat 1955 by 5 to 10 per cent.

TRUCK TRANSPORTATION predictions for 1956 are extremely optimistic—up 10 to 15 per cent over 1955. There are, however, two important qualifications. The industry is betting that Congress will not upset transport equilibrium with drastic changes in the Interstate Commerce Act as proposed by the Cabinet Committee Report. Secondly, "captive" piggy-back at truck-competitive rates has not yet had its impact on the transportation picture measured.

INTERCITY TRUCK TONNAGE hauled by the for-hire segment of the trucking industry was up an estimated 14 per cent in 1955 over 1954. The increase was registered despite crippling strikes in New England and in the western states. This is an all-time high. In 1956, the increase may not equal 1955's in per cent, but it will still be sizeable.

FLEET SUPPLIERS of major equipment, such as trucks and trailers, set many all-time records in 1955, particularly among the larger size vehicles. Despite predictions of some recession in the passenger car market for 1956, this should not affect commercial vehicles. It has been estimated that truck users spent \$2.5 billion for new trucks and trailers in 1955. American Trucking Assns. estimates that the figure will be \$3 billion in 1956, a 20 per cent gain. Along with this, parts makers, fuel and lube refiners and the like can expect a proportionate increase.

BUS OPERATORS, with about 100,000 revenue buses in the U. S. A. (as opposed to an estimated 10 million trucks), can only hope to hold their own in 1956. But there is a good chance that they will, could end 1956 with a better operating ratio despite declining gross revenues.

RECORD TRUCK TRANSPORTATION in 1955 has meant more business for the industry's suppliers as reflected in the 10-month totals summarized below. New truck registrations are almost 90,000 units ahead of 1954. Truck sales are over 76,000 units ahead. Trailer shipments are almost one-third ahead. Truck and bus tires are exceeding 1954 by over 1 million both in original equipment and in replacement sales.

In thousands of units, except bus sales are in actual numbers	New Truck Registrations		Truck Factory Sales—Domestic		Truck Trailer Shipments		Bus Factory Sales—Domestic		Truck and Bus Tires					
									Replacement Shipments		Original Equip. Shipments		Inventory End of Oct.	
	Oct.	10 Months	Oct.	10 Months	Oct.	10 Months	Oct.	10 Months	Oct.	10 Months	Oct.	10 Months		
1955	87.3	787.7	81.4	867.5	7.0	62.2	385	2853	903.7	7782.0	323.5	3993.6	2356.9	
1954	71.3	696.1	49.0	690.8	4.6	44.9	360	3194	827.7	6770.0	250.9	2985.3	2267.7	

Wes
For Makin

WHITE MO
Axle, 11.5

WHITE MO
Axle, 10.

WHITE MO
Axle, 11.

WHITE MO
Axle, 10.

WHITE MO
Axle, 10.

WHITE MO
Axle, 10.

WHITE MO
Axle, 10.



WHITE MODEL W828 with Trucktor Model HR Trailing Axle, 11.00 x 20 tires, mechanical air brakes.



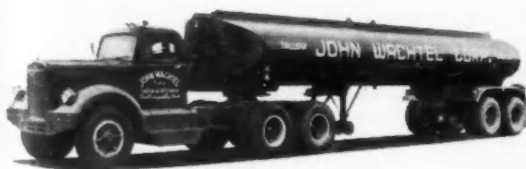
WHITE MODEL WC26 with Trucktor Model HLR Trailing Axle, 10.00 x 20 tires, mechanical air brakes.



WHITE MODEL 302662 with Trucktor Model HR Trailing Axle, 11.00 x 20 tires, mechanical air brakes.



WHITE MODEL 302662 with Trucktor Model HLR Trailing Axle, 10.00 x 20 tires, mechanical air brakes.



WHITE MODEL WC28BF with Trucktor Model HLR Trailing Axle, 10.00 x 20 tires, mechanical air brakes.



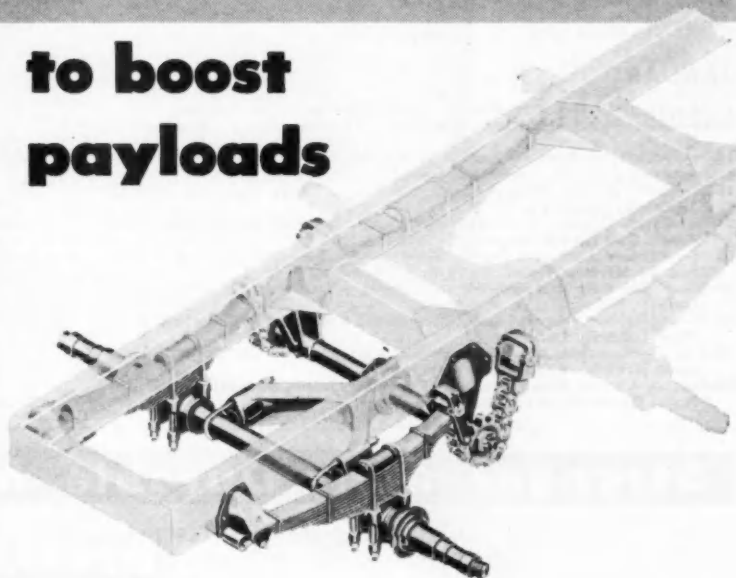
WHITE MODEL WA22T with Trucktor Model HLR Trailing Axle, 10.00 x 20 tires, mechanical air brakes.

Many *White* Truck Owners use

Trucktor[®]

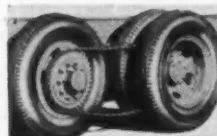
TRAILING AXLES

to boost
payloads



For the smoothest ride . . . best protection for driver, truck and cargo . . . low maintenance costs and long service life . . . get Trucktor's unique "Truck-Mated" Trailing Axle. A rubber-mounted "yoke" tows the axle—keeps wheels aligned and on the ground. The "Chain-and-Sprocket Load Divider" provides maximum flexibility. Full-floating springs, rubber-mounted at the axle, carry *only* the load—take no brake reaction. Six-point frame support protects the frame . . . reduces side sway . . . supports the frame *behind* the last axle.

TRUCKTOR *Detachable* Chain-and-Sprocket 4-WHEEL DRIVE



Makes tire chains unnecessary. When extra traction is needed, sprocket chains are slipped over sprockets and pinned. Attached and detached quickly, simply, without removing wheels (in picture, wheel removed to show construction).

THE TRUCKTOR CORPORATION, Route 22, Mountainside, N. J.

DATES and DOINGS

JANUARY

- 17-20—Highway Research Board, Annual Meeting, Washington, D. C.
18-19—Executive Committee, American Trucking Assn., Washington, D. C.
18-20—American Transit Assn., Region IV Conference, Hotel Dinkler-Andrew Jackson, Nashville, Tenn.
19-21—New Mexico Motor Carrier Assn., Annual Convention, Hotel LaFonda, Santa Fe, N. M.
23-25—Truck-Trailer Manufacturers Assn., Annual Convention, Edgewater Gulf Hotel, Edgewater Park, Miss.
23-27—Regular Common Carrier Conference, Board of Governors Meeting, El Mirador Hotel, Palm Springs, Cal.
24-25—Midwest Shipper-Motor Carrier Conference, Paxton Hotel, Omaha, Neb.
25-27—American Transit Assn., Region VI Conference, Roosevelt Hotel, New Orleans, La.
28-Feb. 1—National Automobile Dealers Assn., Body and Truck Equipment Exhibition, Armory, Washington, D. C.
30-Feb. 2—United Fresh Fruit & Vegetable Assn., Annual Convention, Hotel Roosevelt, New Orleans, La.

FEBRUARY

- 6-9—Automotive Accessories Manufacturers of America, Exposition, Navy Pier, Chicago, Ill.
9-10—Private Truck Council of America, Annual Convention, Cleveland Hotel, Cleveland, Ohio.
12-15—California Trucking Assn., Annual Convention, Hotel Del Coronado, Coronado, Cal.
23-26—Pacific Automotive Show, San Francisco Civic Auditorium, San Francisco, Cal.

MARCH

- 6-8—American Transit Assn., Region III Conference, Hotel Pfister, Milwaukee, Wis.
6-8—Society of Automotive Engineers, Passenger Car, Body and Materials Meeting, Hotel Statler, Detroit, Mich.

APRIL

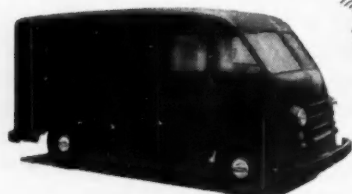
- 8-10—Western Highway Institute, Annual Meeting, El Mirador Hotel, Palm Springs, Cal.
11-12—American Transit Assn., Region V Conference, Hotel Lassen, Wichita, Kan.
11-12—Midwest Shipper-Motor Carrier Conference, Kentwood Arms Hotel, Springfield, Mo.
11-14—Middle Atlantic Regional Automotive Show, Commercial Museum, Philadelphia, Pa.
16-18—American Transit Assn., Region VII Conference, Palace Hotel, San Francisco, Cal.
22-26—National Tank Truck Carriers, American Trucking Assn., Shoreham Hotel, Washington, D. C.
28-May 6—International Automobile Show, New York City Coliseum, New York, N. Y.
29-May 3—Operations Council, American Trucking Assn., Annual Meeting, Sheraton-Cadillac Hotel, Detroit, Mich.

MAY

- 2-4—American Transit Assn., Region II Conference, Lord Baltimore Hotel, Baltimore, Md.
5—Local Cartage National Conference, American Trucking Assn., New Orleans, La.
8-10—National Highway Users Conference, Highway Transportation Congress, Washington, D. C.
8-11—Equipment and Maintenance Council, American Trucking Assn., Spring Meeting, Sheraton Hotel, Chicago, Ill.
8-11—Council of Safety Supervisors, American Trucking Assn., Spring Meeting, Sheraton Hotel, Chicago, Ill.
10-13—Southwest Automotive Show, Houston Coliseum, Houston, Texas.
13-19—Regular Common Carrier Conference, American Trucking Assn., Board of Governors Meeting, Edgewater Park, Miss.
25-26—Southeast Automotive Show Trade Conference, Asheville, N. C.

Stronger. More Durable, More Modern, Lighter

TRUCK BODIES of MONTEPELIER (FRP) FIBERGLAS Reinforced PLASTIC



Montpelier Urban Delivery Body



Montpelier Side-Aisle Delivery Body

Montpelier
FIBERGLAS REINFORCED PLASTIC
BODIES

NO OTHER BODY STRUCTURE HAS ALL THESE CHARACTERISTICS

CORROSION — ODOR PROOF

MONTPELIER (FRP) Plastic bodies do not corrode—do not pick up odors—rust—rot—and may be steam cleaned without deterioration.

SUPERIOR INSULATING VALUE

MONTPELIER (FRP) Plastic body material has superior electrical and thermo insulating characteristics. FRP conducts only 1.2 B.T.U. as compared to 1200-1500 B.T.U. for aluminum, and 275-325 B.T.U. for steel.

REDUCED BODY WEIGHT

Considerable reduction in body weight—saves tires—saves gas—saves maintenance—improves load capacity.

IMPROVED BODY SANITATION

A high degree of sanitation is possible due to the extreme resistance of MONTPELIER (FRP) Plastic body material to acid—chemicals—odors—corrosion.

MAXIMUM STRENGTH

MONTPELIER (FRP) Plastic body construction results in body strength as great as any other body material used under similar conditions.

REPAIR AND MAINTENANCE

MONTPELIER (FRP) Plastic body material lends itself to easy repair of body damage. Such repairs may be easily and quickly made without a great deal of skill. Repainting is a comparatively simple procedure.

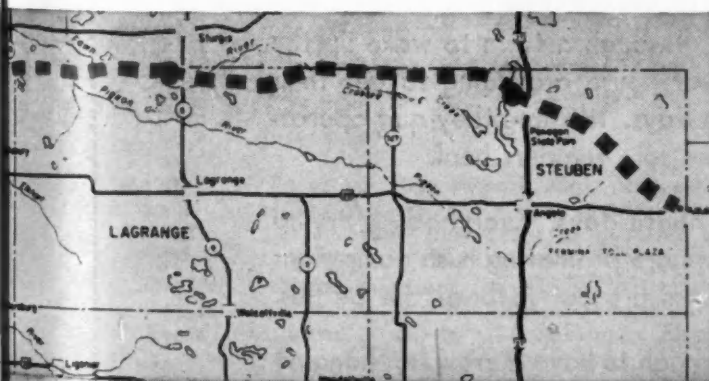
WRITE — WIRE — PHONE FOR COMPLETE INFORMATION

THE MONTEPELIER MANUFACTURING CO. • MONTEPELIER, OHIO

WESTERN CONTRACTING CORPORATION FIELD SHOP



Equipment Superintendent, Lewis A. "Shorty" Martin (right), and Standard automotive lubrication specialist O. H. "Grit" Collier discuss parts maintenance at Western Contracting Corporation field shop. Field technical service such as this is old stuff to Grit Collier. He has been doing such work for 10 of his 22 years at Standard Oil. Grit is a graduate of the Standard Oil Sales Engineering School. Customers find this experience and training pay off for them.



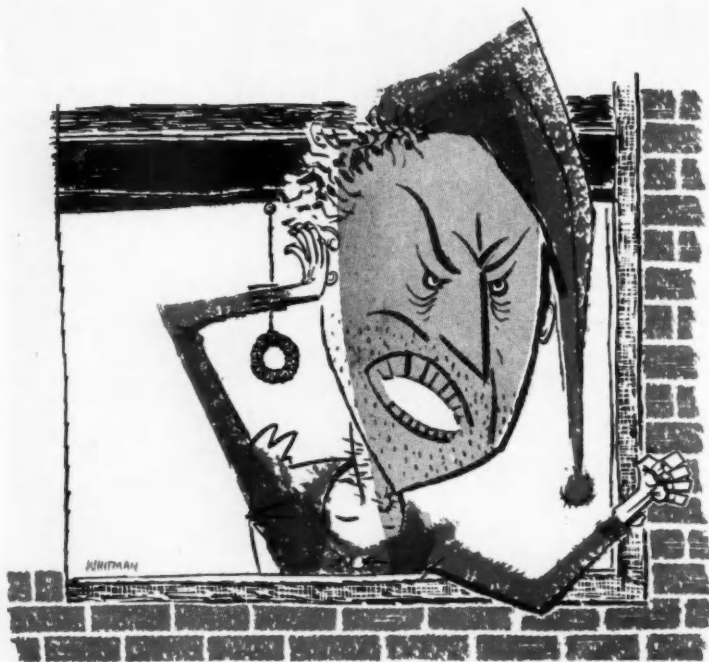
Quick Facts About STANOLUBE Motor Oils

- 1 STANOLUBE Heavy Duty Motor Oils are refined from high quality base stock.
- 2 Additives exclusive with STANOLUBE Heavy Duty Motor Oils retard oxidation, reduce formation of piston and ring belt deposits.
- 3 These additives in STANOLUBE Motor Oils prevent fuel from forming varnish and sludge.



STANDARD OIL COMPANY
(Indiana)

CCJ BULLETIN BOARD



Operating in the Red

These cowboy drivers who like to bull through a town to wake up the late sleepers with a loud-mouthed power house are going to get their own stripped cans KO'ed some of these days. It's time they quit operating on the mufflers and let some of these sore tempers heal.

There's a lot of noise about mufflers these days. Everybody is trying to do something about it. Vehicle owners are promoting hush campaigns but at the same time some of the drivers are out to beat the baffles.

Now just about anybody who is old enough to have a crow bar hanging around knows how to ram it through the can to open it up. But anybody who is anybody knows that more noise doesn't mean more power. It only squeezes more squawks from the public. Today's engines with halfway respectable exhaust systems don't create enough back pressure at the mufflers to measure with a tin drum. So gutting the cans don't get you more stuff to pull loads.

Remember this, you guys with the jiffy can openers. Hoarse power is not horsepower—in spite of your ears. What you hear with a reamed out muffler is the loud roar of an unhappy public. So let's have a little quiet.

Autocar
Driver Cab... built like a
skyscraper

"TYPICAL OF SO MANY AUTOCAR EXTRAS"



W. H. Ford has been using Autocars in his fleet since 1932

THAT'S W. H. Ford, president of Ford Bros., Inc., of Ironton, Ohio, in the driver's seat of that husky AUTOCAR. Ask him about the AUTOCAR Driver Cab and the AUTOCAR "Ful-Adjust" Driver Seat. "Best cab ever installed on a truck. Our drivers are most enthusiastic about it ... typical of so many Autocar extras," he says.

PERFORMANCE—that's another AUTOCAR extra! "We use Autocars in severe hills and mountainous terrain. We've improved tremendously on normal road speed and gradeability with Autocar power to take advantage of maximum payload and move with today's heavy flow of traffic," Mr. Ford says.

For Facts About Autocar for Your Business, Call
Your White-Autocar Representative—or Write

AUTOCAR TRUCKS

AUTOCAR DIVISION OF THE WHITE MOTOR COMPANY

EXTON, PA.

Export Division—Cleveland

Cables: Whiteco

**FIND
OUT
MORE!**

AUTOCAR DIVISION
The White Motor Company
Exton, Pa.

Send me copy of your new AUTOCAR DRIVER CAB book.

Name

Firm

Address

City Zone State

3-A



Laugh it off!

The young parts clerk watched his flat-chested wife unwrap a parcel containing a new brassiere.

"What did you buy that thing for?" he asked. "You haven't got anything to put in it."

"You wear shorts, don't you?" she angrily retorted.

CCJ

Terminal Manager: "Congratulations, Elmer, I see you've been elected one of the judges in the bathing beauty contest at our company picnic next week."

Dock Foreman: "That's right, boss, but I've got a confession to make. I've never acted in that capacity before, so, in the beginning, I guess I'll just have to feel my way around."

CCJ

Shop Foreman: "Mmmm-mm! Love was born with that kiss, darling."

Sugary Babe: "O.K., Mac, but hurry up and wipe off the birthmark. Here comes my old man."

CCJ

Wifey: "Honey, I'm glad that in your work you have to have a good memory for faces."

Fleet Personnel Manager: "Why?"

Wifey: "I just dropped your shaving mirror."

CCJ

Hi-Lo Operator: "Whatcha know? Ole Gus, our hook-up man, has been in bed for three days."

Freight Checker: "Accident?"

Hi-Lo Operator: "No — marriage."

1st Freight Loader: "Sam, what do you think of a woman who pads her figger here, falsifies it there and camouflages it elsewhere?"

2nd Freight Loader: "It's a sham dame."

CCJ

SLIM SAYS THAT EVER SINCE HE WENT TO THE FLEA CIRCUS HE'S HAD THE FEELING THAT ONE OF THE LADY PERFORMERS GOT STUCK ON HIM.

CCJ

Cute Nurse: "Doctor, I'm afraid that truck driver in Room 208 isn't doing too well."

Doctor: "Well, let's make him as comfortable as possible. Give him what he wants."

Nurse (blushing): "Not on your life, Doc. Not until he proposes."

Cici Jay



"Peek around the corner and you'll see why I keep the shop on the chilly side!"

Lady Passenger: "Driver, is smoking permitted in this bus?"

City Transit Driver: "No Ma'am."

Lady Passenger: "Then where did all these cigarette butts come from?"

City Transit Driver: "From people who didn't ask questions, Ma'am."

CCJ

The private secretaries of a southern fleet operator and a northern fleet operator were attending a training conference for secretaries. Naturally the subject of men came in for quite a bit of discussion.

Northern Fleet Secretary: "Well, say what you will, my position is that men are all alike."

Southern Fleet Secretary: "Men are all ah like, too."

CCJ

The air brake mechanic had been making the rounds of his favorite bars. Turning the corner, he bumped into a little old lady, all crippled up, hobbling along the street. "What's the trouble, ma'am," the brake mechanic asked, "Ish it arshritis?"

She said, "Nope, 'tain't, Johnny. But you just can't wear a garter belt with bobby socks."

CCJ

Fleet Operator: "Bill, I can't understand why you won't consider a man for a job as mechanic unless he is married."

Maintenance Supt.: "Well, Boss, it's simple enough. We like to keep peace in the shop. Married men don't blow up when they're yelled at."

Resume Work

COMMERCIAL CAR JOURNAL, January, 1956

INTERNATIONAL TRUCKS

First choice of men who know 6-wheel costs



Model DFC-400 diesel-powered COE 6-wheeler, 76,800 lbs. GCW. Lightweight construction brings weight to 14,314 lbs. with fifth wheel, ready for road, less fuel.

Here are 3 BIG reasons why :

Now — NEW Gasoline, LPG and Diesels for a total of 101 models

SF-180 Series—GVW rating, 30,000-33,000 lbs. GCW, 45,000 pounds. Gasoline or LPG engines.

RF-200 Series — GVW, 37,000-41,000 lbs. GCW, 65,000 lbs. Royal Red Diamond 212-hp gasoline engine, optional.

RDF-210-H Series—GVW rating 37,000-45,000 lbs. Diesel powered. For highway or off-highway service.

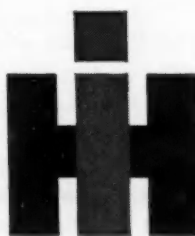
FC-400-L Series—GCW, 55,000-62,000 lbs. Gasoline powered COE highway units with new lightweight features for greater payload.

DF-400 Series—GCW rating, 68,000-76,800 lbs. Diesel powered with new payload-boosting lightweight features.

1. **World's Widest Range of 6-wheel Models.** The INTERNATIONAL 6-wheel truck line offers trucks of every size and type from 22,000 to 90,000 pounds GVW—conventional and COE, gasoline, LPG and diesel—all available in hundreds of variations for *exact* matching to the requirements of every job.
2. **Custom-Built on the Production Line.** Years of experience in volume manufacture has created unmatched ability for pinpoint specialization in production line assembly. This means appreciable production savings, and is one of many superiorities that have made INTERNATIONAL the 6-wheel truck leader for 21 straight years.
3. **All-Truck Built to Save You the BIG Money.** INTERNATIONAL 6-wheel trucks are *all-truck* from the drawing board out with every component designed to do a truck job. They *last longer, work more dependably*—to save you the BIG money, the over-the-years operating and maintenance money.

INTERNATIONAL HARVESTER COMPANY • CHICAGO

**All-Truck Built
to save you
the BIG money!**



INTERNATIONAL[®] TRUCKS

Motor Trucks • Crawler Tractors • Industrial Power
• McCormick[®] Farm Equipment and Farmall[®] Tractors



AGREED CHARGES—A Menace to Truck Operators

YOU'RE GOING to hear a new phrase used frequently this year.

The phrase: "Agreed Charges." Literal definition: an agreement between a carrier and a shipper or group of shippers by which the shipper gets low rates in return for guaranteeing to ship a stated minimum percentage of his freight (at times as high as 100 per cent) via the carrier. A simpler definition: poison for the American trucking industry, both private and for-hire.

A potent weapon in the railroads' battle against truck competition, agreed charges threaten for-hire carriers with a potential price-cutting war, could lead

*Former I.C.C.
Commissioner
Warns of
Dangers*

Canada arising from railroad efforts to spread the "agreed charges" scheme and of the likelihood that American railroads might try to introduce it in this country. Major attention was given to the problem

to the end of many private fleets and contract carriers by making it cheaper for the shipper to ship by rail under an agreed charge.

American Trucking Assns. has been warning truck operators since late last year of the dangerous developments in

Rail
pote
obto
to lo

at the rec
missioner
cussion o
meeting
Knudson

A prop
If you do
all you ha
industry
toughest
chance to
charges.
showed a

By Jack Colgan

Special Features Editor

This article caused much discussion and debate in our editorial office before we decided to publish it. None of us like crying "wolf," and we appreciate that our timing on this may be too advanced.

Still, good publishing practice requires a magazine to keep its readers informed on all significant developments—good or bad. And in this case, Jack Colgan's previous experience in covering the Canadian trucking scene makes him well qualified to evaluate the facts concerning the threat of agreed charges to truck operators in this country. So here are the facts, and some opinions on their significance.

Commenting on an advance copy of this article, Neil J. Curry, Chairman of the Board of American Trucking Associations said: "All indications point to the fact that American railroads are showing a keen interest in the 'agreed charges' device. We probably shall see an active campaign by them for its adoption in the United States, as a corollary of their current campaign to revise National Transportation Policy, which is designed primarily to permit selective rate cutting as a competitive weapon against the trucking and water carrier industries" . . . The Editors.

Railroads are interested in this potent weapon, may succeed in obtaining Congressional approval to launch wide-spread rate cutting

at the recent ATA convention when former ICC Commissioner James K. Knudson presented a detailed discussion of the subject. Some of the people at the meeting probably left with the impression that Mr. Knudson was a prophet of doom, crying "wolf."

A prophet he may well be. But he was stating facts. If you doubt that agreed charges are a serious threat, all you have to do is check with the Canadian trucking industry which is currently engaged in one of the toughest fights of its existence just to earn a fighting chance to compete with the railroads' use of agreed charges. Several years ago, Canadian truck operators showed a notable lack of interest when the railroads

began to experiment with agreed charges. I was in Canada at the time with a Canadian trucking publication. There, as here, the early attitude of many fleetmen was not one of great concern, and people who warned of the dangers in agreed charges were labelled prophets of doom. Now, it's a different story as the trucking industry works desperately to avoid being put out of business.

Agreed Charges Linked to Cabinet Report Legislation

Why raise a fuss about agreed charges now, when you're already worried about prospects of changes in transportation legislation stemming from the Cabinet Committee report?

Because upcoming legislation could open the door for the railways' use of agreed charges in this country. Commenting on the Cabinet Committee report's proposal to permit railroads to offer reduced rates in return for large-volume shipments, John Magee, Executive Secretary of the Canadian Trucking Assns., said this proposal "has overtones of Canada's agreed charge rate-making." In his presentation at the ATA convention, Mr. Knudson pointed out that comments by railway spokesmen amount to "a casual linking of the agreed charge principle to the Cabinet Committee report and to the legislative recommendations stemming from it." Said Knudson: "It wouldn't be impossible to have some 'inspired' legislator propose agreed charges as an amendment to S 1920 just to get that bill moved further along."

And American railroads are interested in using agreed charges as a weapon to compete against trucks. Several railroad officials have stated their support for this method of rate making. Among them: Robert R. Young of the New York Central, Patrick McGinnis of the New Haven, a vice-president of the Erie, and several others. The Great Northern R.R. which operates into Canada appeared before a recent Canadian regulatory hearing to request permission to become a party to agreed charge arrangements initiated by Canadian railroads. Permission was granted, and it is now possible for American railroads operating into Canada to participate in agreed charges.

N. Y. Central Executive Sees Advantages in Agreed Charges

Speaking at a Traffic & Transportation conference in Michigan last May, A. E. Baylis, vice-president in charge of freight and traffic for the New York Central, had this to say about agreed charges:

"Opponents of agreed charges can think of many reasons why they are unworkable, illegal and in violation of various sections of the Interstate Commerce Act and the Clayton and Sherman Acts. However, those of us who favor the charges think that a separate section can be provided in the Interstate Commerce Act to overcome all these difficulties. A thing of this magnitude is not easy to start, but it definitely can be started in the United States and I am sure that it will be started before long. We have drawn up

(TURN TO NEXT PAGE, PLEASE)



AGREED CHARGES—A Menace . . .

Continued from Page 67

some suggested procedures to accomplish this and will work actively toward that end at the proper time."

On the basis of past experience, there's no doubt that the railroads have decided that now is "the proper time," and that they aim to make agreed charges a part of their rate structure in this country. If they succeed, the trucking industry, as we know it

now, is in for the toughest competition it has ever had.

Truckers Are Hit Hard By Canadian RR.'s Agreements

What happens when railroads are permitted to use agreed charges as a part of their rate structure?

In Canada, at a time when only 51 agreed charges were in effect, the Canadian Trucking

Assns. estimated that the trucking industry was losing \$21 million a year revenue to the railroads. Canadian railroad spokesmen estimated that with greater legislative freedom (which they've recently obtained) they would institute "thousands" of agreed charges. When you consider the revenue already lost with only 51 agreed charges in effect, and compare this with the Canadian trucking industry's annual gross revenue of only \$316,000,000, you can appreciate why Canadian truckers are unhappy.

If you're not impressed with the industry's revenue loss, maybe this fact will help you appreciate what can happen when railroads are permitted to use agreed charges. Since agreed charges have been offered on the shipment of new cars from points in Ontario to the Western Provinces, 75 per cent of the truckers who formerly hauled new cars have gone out of business. And there's no reason why the same story couldn't be repeated in this country among all the truck operators now competing with the railroads, including the private carriers. So there's good reason for you to be concerned with the problem, and it's important that you know the facts about agreed charges.

In Canada, railroads based their application for permission to freely use agreed charges on the claim that this method of rate-making was essential for them to successfully compete with trucks. They claimed the railroads were at a competitive disadvantage, that they would be able to provide service at lower costs if they could obtain larger volumes of traffic. That as an essential form of transportation they should be able to compete freely with trucks by lowering their

rates when they felt it was necessary.

Some quotes from the Canadian report which recommended to the government that railways be granted wide latitude in making agreed charges make interesting reading. The report was prepared by a Royal Commission, which is roughly equivalent to a congressional advisory committee. Said the report:

"As things are now, the railways need relief in the form of better means to compete with others in the pursuit of their business as purveyors of transportation . . . the practice of agreed charges was introduced into Canada mainly for the purpose of enabling the railways to cope more effectively with the competition of the trucks. This purpose must therefore be kept in view when changes in the law are being considered, and must prevail against objection, so long as it does not go so far as to create an injustice toward truckers or others. . . . The proposed changes in the law will probably make things easier for the railways and enable them to secure more business."

If you've read the Cabinet Committee report and subsequent railroad advertisements and statements in connection with it, you'll have no difficulty in recognizing the similarity of approach.

Here's How The Situation Appears to Shape Up

What can you expect in the way of developments concerning agreed charges?

Roughly, here's the way the situation appears to shape up:

The railroads will probably attempt to obtain legislation which makes agreed charges legal during the next session of

Congress. Chances are, the exact term "agreed charges" won't be used. Instead, the phrasing will be something such as "reduced rates for volume shipments." Whatever name is given to the arrangement, it will have these elements:

A rail carrier will be able to offer a shipper or group of shippers a reduced freight rate on a specified commodity or commodities in return for the shipper's guarantee that a specified minimum percentage of the shipments will be sent by rail.

The rail carrier will be able to establish the rates with a minimum of delay and under the least possible influence of a regulatory body.

The rail carrier will only have to show that the

(TURN TO PAGE 124, PLEASE)

Linking

nearby a

lets, tan

become t

USED F
most short-
play a major
industry's d
recent year
increasing
tic transpo
roleum an
While truck
by the ind
from explor
posits thro
consumers,
and distrib
jobs lie.

The Tank

At local
trucks are
riers. The
operated b
tail organi
refinery co
pendent oi
or retailer
ness.

Accurate
number of

COMMERCIAL

ich rec-
granted
e inter-
a Royal
a con-
ort:

f in the
s in the
nsporta-
s intro-
enabling
he com-
herefore
re being
tion, so
injustice
changes
for the
usiness."
ort and
ments in
n recog-

t in the
ncerning

way the
hape up:
probably
gislation
charges
ession of
"agreed
g will be
me ship-
ngement,

ipper or
specified
shipper's
ge of the

the rates
possible

that the

uary, 1956

**Linking refiners with
nearby and distant out-
lets, tank trucks, have
become the nation's . . .**



Rubber-Tired Pipe Lines

USED FOR nearly all local and most short-haul deliveries, trucks play a major role in the petroleum industry's distribution system. In recent years they have handled an increasing percentage of all domestic transportation of crude petroleum and petroleum products. While trucks are used extensively by the industry in all operations from exploration for petroleum deposits through final delivery to consumers, it's in transportation and distribution that their major jobs lie.

The Tank Truck Fleet

At local level, most petroleum trucks are operated by private carriers. These trucks include those operated by the wholesale and retail organizations of major oil and refinery companies and by the independent oil jobber, oil distributor or retailer operating his own business.

Accurate information on the number of trucks used in distri-

bution is not available, but the Oil Heat Institute estimates that there are now more than 70,000 trucks used for retail delivery of fuel oil alone, and points out a need for further expanding this fleet by about eight per cent. All together it is estimated that there are more than 200,000 trucks used by the petroleum industry for all purposes, not including the 15,546 tank trucks operated by for-hire carriers.

How big is the distribution job?

Preliminary data from the Bureau of Mines for 1953 shows the domestic demand for refined petroleum products totaled 2,785,309,000 barrels. This figure includes more than 51 billion gallons of motor fuel, 349,322,000 barrels of heating oils, 114,397,000 barrels of kerosene, 40,481,000 barrels of lubricating oils and greases.

Bulk Transportation

Use of trucks for bulk movements of crude and refined pe-

troleum has had a tremendous growth in the past 15 years. Early tank trucks were small, with capacities ranging from 500 to a maximum of 1500 gallons. It was not until the early 1930's, when trucks and tractor semi-trailers with capacities of 4000 to 5000 gallons were introduced that highway transportation began to take its position as a factor in petroleum product movement. Since 1938 a steadily growing percentage of petroleum shipments have been by tank truck.

According to estimates by the Committee for Pipe Line Companies, in 1938 trucks transported 10.59 per cent of refined petroleum products, 1.17 per cent of crude petroleum. By 1954 trucks were handling an impressive 34.24 per cent of refined products, and 5.32 per cent of crude petroleum. This gain in traffic was mainly at the expense of rail carriers which in 1938 had handled 30.41 per cent of re-

(TURN TO PAGE 106, PLEASE)



Back to School At No

VTHE RAPID technological changes which manufacturers have made in recent years, combined with the ever increasing personnel problems of the labor-management field, do not permit a sufficient amount of time for maintenance supervisors to learn—by practical experience alone—all the knowledge of mechanical equipment required to do the most efficient job.

This fact was recognized a number of years ago by the New York City Omnibus Corp. Therefore, we instituted a program by which our maintenance men are helped and encouraged to help themselves, gain the technical facts, "the how and why," so to speak, concerning their equipment.

Maintenance Studies

These programs which were instituted are referred to as "Maintenance Studies." They were organized to increase the knowledge of supervision in our mechanical equipment by explaining the me-

In-service training of foremen and supervisors extends

chanical function of new units, and also stimulating interest and recollection in the details of those units with which we have worked through the years.

At New York City Omnibus, we recognize that no definite program is of any value, unless the knowledge gained is transmitted by supervision to those persons who actually perform the details. It is through the new approach and techniques of explanation of the mechanical equipment that supervision is provided the means to help them, in turn, educate mechanics on the job.

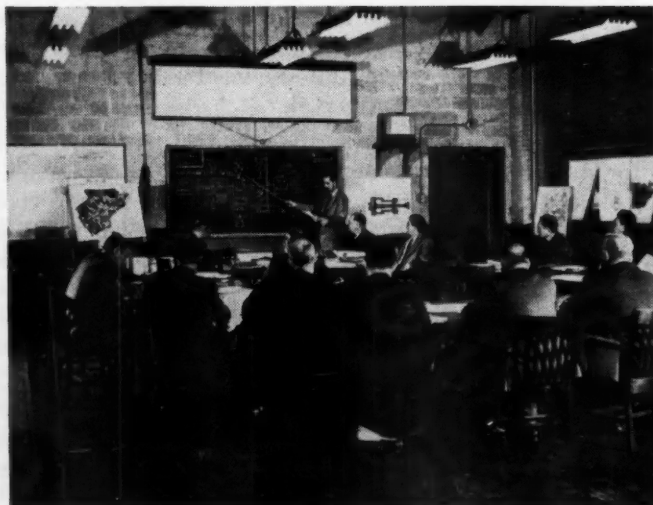
Establish Procedures

It is through these gatherings of mechanical supervision that information supplied by garage and

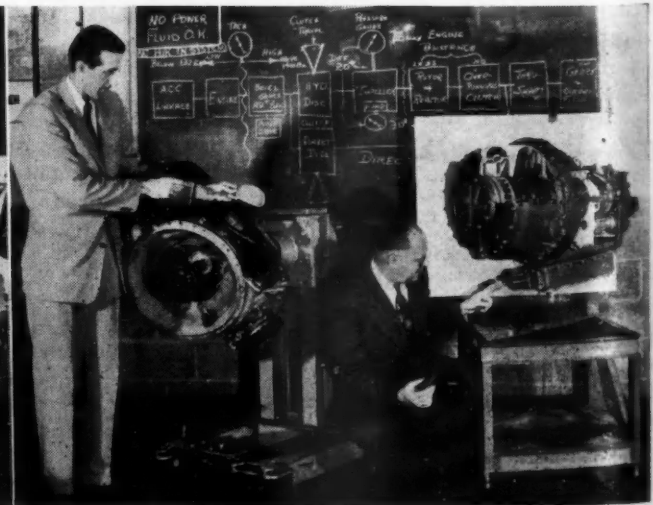
shop supervision, factory representatives, and maintenance supervisors is correlated to find the solution to mechanical failures and set up procedures to obtain the maximum life from the various units.

In order to accomplish the objectives of this maintenance program, a location is used that has been arranged solely for training purposes. In addition to the usual equipment used in training, such as blackboard, charts, and facilities for showing motion pictures and slides, an area is provided so that a complete vehicle can be driven into the room. Provision is made for piping the exhaust out of the building so that the engine can be operated to make certain demonstrations.

The Ninth Maintenance Study in session with foremen and supervisors from the fleet's eight garages taking part



Moreland outlines a streamlined method of checking the V-drive. J. M. McNerney points to cutaway model of unit



No

parts mi

Because a 24-hour-a-day business, our 6 groups of time. Each hours long each separate days. tions in se not permit each new held at a year.

The sub cover all t of vehicu specific pr items whic failures or immediate ment, with ments or

Parts of d course. Un



At New York Omnibus



By James P. Moreland

Chief Engineer
New York City Omnibus Corp.

parts mileage, reduces failures, cuts maintenance costs

Because the transit industry is a 24-hour-a-day, 7-day-a-week business, our 60 supervisors attend in groups of approximately 20 at a time. Each session is about seven hours long and it is repeated for each separate group on consecutive days. It was found that variations in service conditions would not permit definite scheduling of each new session, but they are held at a rate of four or five per year.

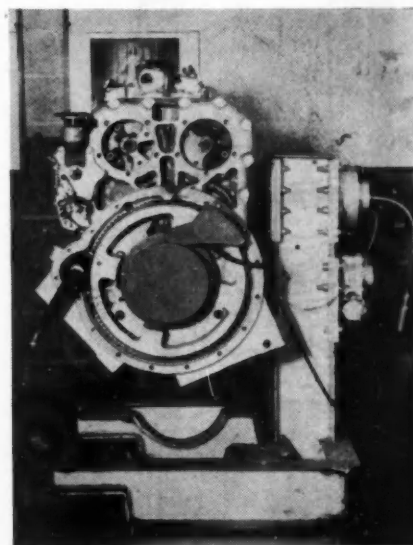
The subject matter is chosen to cover all the component functions of vehicular maintenance with specific preference given to those items which, because of premature failures or high cost, require more immediate attention. New equipment, with specific service requirements or with a completely dif-

ferent type of mechanism, would certainly signal the need for such a session.

Visual Education

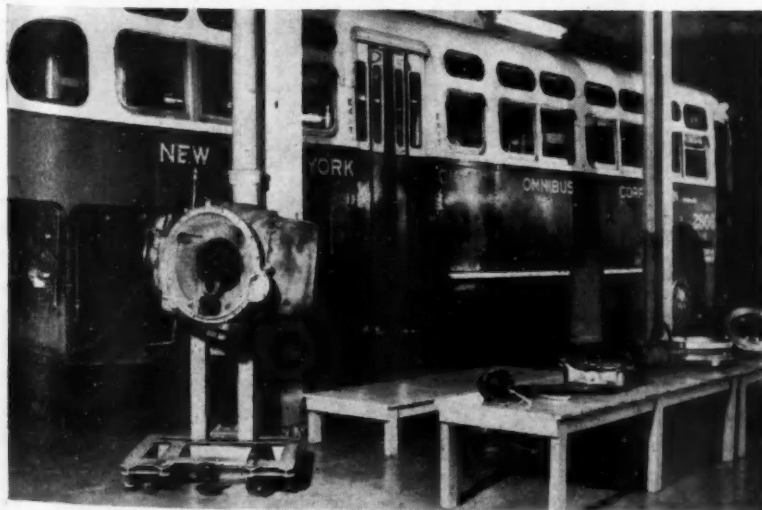
The much used cliché that "a picture is worth a thousand words" cannot be more true than in the explanation of the function of a detailed part. For this reason cut-away units, large cross sectional drawings, schematic diagrams, films, slides, and actual parts and assemblies are used as instructional material. Considerable assistance has been obtained in this regard from manufacturers of the various units, who use this material for their own educational programs. Those who handle the details of a given session are se-

(TURN TO PAGE 112, PLEASE)

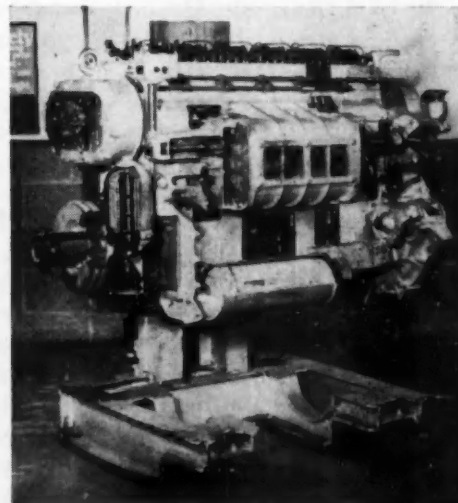


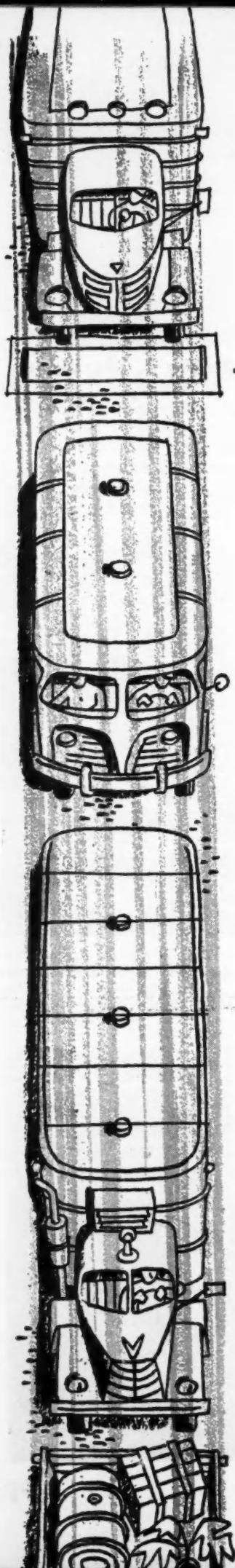
Operation of each part of cutaway engine is shown by color, lights, open sections. When engine rotates, lights flash to show firing, combustion cycle

Parts of drive are laid out on bench in conducting the technical course. Units from two models of coaches are described in detail



This cutaway engine is on display the year round to help men understand its functions





Weigh 'Em on the Go!

Electronic "load cells" spot only overweight vehicles, let

▼ HOW MANY dollars each year are lost by the trucking industry while their vehicles are waiting along the highway at a state weighing station? How many fleet operators are being penalized this way because of a few who continually and wilfully violate axle and gross load limits? How much more may be expected of our highways if the present program of rigid weight control is followed?

These are a few of the questions that are perplexing the state highway officials and enforcement officers today! And, the answer to this problem is focused directly on truck weighing techniques. The weighing of truck axles and the enforcement of axle load limits has not kept pace with the growth of the trucking industry. There are presently over 9,000,000 truck registrations in the United States, and their operations to a great extent have been over the nation's primary road system.

Present Methods

Until recently there have been but two methods of controlling truck axle weights. First, the installation of stationary scales along the roadside where every truck is required to stop for weighing, and second, by a type of portable scale which permits enforcement officers to spot check

trucks that appear to be excessively laden.

The static weighing station along the highway which requires every truck to halt for the weighing operation is costly to install, and, of course, requires all truck transportation to stop, even those vehicles that have been loaded to within the legal limits. Often during heavy traffic periods one will see trucks lined up for weighing, waiting their turn, for a distance of a half-mile ahead of the weighing station.

Naturally such an interruption of schedule discourages the operator who is sincere in trying to keep his load within the prescribed limits, and for the same reason encourages the illegal loader to exert every initiative to find bypass roadways. This latter technique further aggravates the difficult road situation, since many bypass roadways are not designed for this type traffic.

Portable Scales

The small type portable scales used by the enforcement officers in spot checking are heavy and unhandy to use. Often the results will not stand up in court since the entire vehicle was not weighed entirely in a single operation. It is a fact, strange as it may seem, that in some states legislation had to be enacted stating that insofar as the law of enforcement was

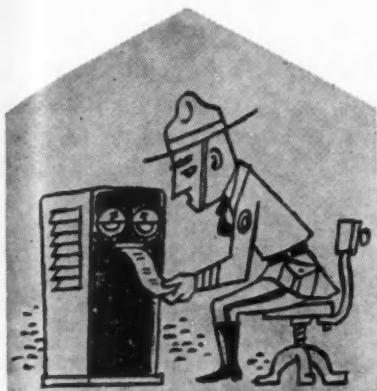
the legal

concerned, truck is to of its indi

This sim rather ele operator truck may overweight weighing t

Electronic

Because that had agencies limiting lo because of the techn proved to



the legal loads go by

concerned, "the gross weight of a truck is to be considered the sum of its individual axle weights."

This simple statement may seem rather elemental, but many an operator could prove that his truck may or may not have been overweight, depending upon the weighing technique used.

Electronic Weighing

Because of all the difficulties that had been encountered by agencies attempting to enforce limiting loads on truck axles, and because of a sincere desire to see the techniques of weighing improved to a point of least inter-

ference with truck travel, the U. S. Bureau of Public Roads, in 1951, undertook a study of this matter. In consultation with several well-known manufacturers, an equipment design and plan was evolved utilizing an instantaneous electronic type of weighing as opposed to the time honored system of mechanical lever systems.

The design of electronic weighing equipment involves the use of a "resistance wire strain gage load cell." A standard load cell, sometimes called a transducer, converts the weight imposed on it into an electrical energy output. The voltage output varies in direct proportion to the amount of weight impressed on the cell, and is directed to an indicator calibrated to read directly in pounds. After several years of successful testing in a highway near Washington, D. C., commercial equipment has recently become available for the weighing of vehicles as they proceed down the highway at any speed up to 50 or 60 mph.

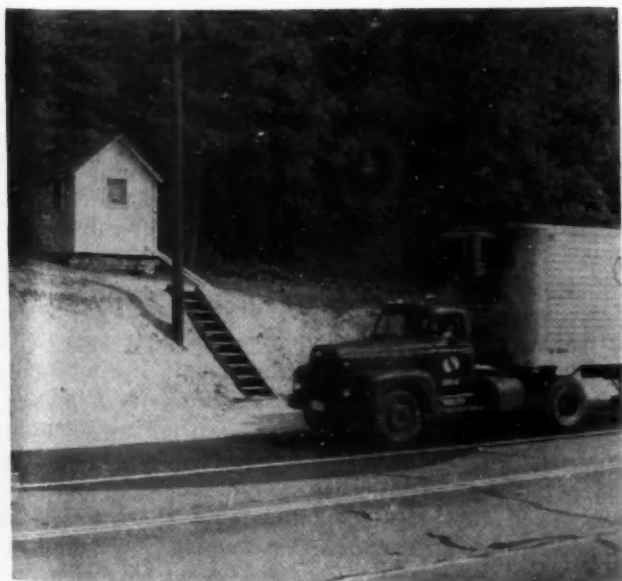
A small platform in the road, 3 x 10½ ft, is required. At 60 mph an axle remains on the platform a mere 1/30th of a second. During that short interval of time its weight, in terms of volts, is transmitted to a remote indicator which imprints on a tape not only the weight of each axle but also provides the truck axle spacing and velocity as well. The plat-

form is supported by four load cells and is restrained in its movement by a rubber bumper around its edge.

Spots Overweights

Developed simultaneously with the weight recording device were components designed to trip appropriate relays when either a single or tandem axle carries an excessive load. Thus was provided a piece of equipment that not only would measure all axle loads, speeds, and spacings but also could cull out of the traffic line those trucks having excessively loaded single or tandem axles. All this is done without holding up traffic.

At the present writing, the states of Iowa, Oregon, Virginia and Minnesota have already installed the new electronic motion weighing equipment. The Iowa Highway Dept. has located a single unit in the eastbound lane of the Lincoln Highway (Route 30 near Tama). It has now been in operation for about eight months. Accuracies to within 500 lb on axle loads of from 18-20,000 lb are being recorded. Iowa plans to extend its use of the new electronic equipment to additional locations eventually, including all major highways in the state. (It is possible to install the indicator in a station wagon and to travel from one platform location to another, (TURN TO PAGE 192, PLEASE)



Here Is One in Use

Typical of electronic scale installations is this one located just south of Woodbridge, Va., on the north-bound, outside lane of Route 1. Operated by the Bureau of Public Roads and the Virginia Highway Dept., it is used (1) for collecting research data on axle weights and spacings, and vehicle speeds by the BPR, and (2) for spotting overweight vehicles by the Virginia Highway Dept. for penalty weighing at an adjacent static weighing station.

Installation comprises a 3-ft platform across the traffic lane supported by four "resistance wire strain gage load cells." An axle is on the platform about 1/30th of a second, and its weight is converted to voltage by the cell. This current is transmitted to an indicator calibrated to translate the voltage into pounds. Small shack above the electronic scale houses the recording instruments at the Virginia installation.

Multi-Purpose Greases

Can Slick Up Your Service



They reduce chances of using wrong grease,

DEVELOPED TO perform several lubrication functions which formerly required specialized greases, multi-purpose greases offer potential cost savings to fleets using them, despite somewhat higher initial cost.

To take full advantage of the savings, however, it's important to know what the greases can do, how to make the most effective use of them.

Three Savings

Briefly, multi-purpose greases offer you savings in three ways:

1. A single grease replaces the several specialized greases formerly needed to lubricate the water pump, universal joints, wheel bearings and all chassis parts.
2. With only one grease there is no chance of using the wrong grease in a specific application.
3. In most cases, the multi-pur-

pose grease performs better than the specialized grease it replaces.

With one grease instead of several your stock of grease can be reduced—you save space and have less capital tied up, you save time on lube jobs—since the job is continuous, there are no delays in switching from one set of grease equipment to another, training of lube personnel is simplified, your lube equipment costs are reduced since fewer lines, pumps, guns, etc., are needed, and there is less waste of grease.

Using only one grease ends the problem of getting the wrong grease for a particular job. This means less chance of equipment failure due to faulty lubrication, less chance of complaints that the lubrication staff is incompetent.

Lengthen Service Schedules

In most cases, the multi-purpose grease out-performs the specialized grease it replaces. This provides an opportunity to lengthen service schedules. One grease manufacturer reports that in test fleets using multi-purpose grease for wheel-bearing lubrication it was possible to change the service intervals from a previous 8000 to 10,000 mile limit to 50,000 miles and more. In effect, this meant

that the brakes rather than the wheel bearings became the prime factor in establishing wheel servicing schedules.

There should, however, be a word of caution in this regard. Not all multi-purpose grease manufacturers recommend their product for extreme heavy-duty wheel bearing application. It is wise to check with the grease manufacturer's recommendations for the product in this application.

In other tests, use of multi-purpose grease resulted in a 25 to 30 per cent reduction in grease consumption when service periods were not changed. Number of lubrication jobs from a given amount of grease increased from 25 to 40 per cent. Some fleets reported major improvement in wheel bearing life, as well as a 50 per cent decrease in replacement of bushings, king-pins and associated items.

Lithium Greases

Most multi-purpose greases now on the market have a lithium-soap base or thickening agent, although some use non-soap jelling agents. In addition to the thickening agent, there is an oil which is selected for its lubricating characteristics and additives which may inhibit the grease to prevent corrosion or

Like any disc
multi-purpose
number of l
offered valua

Nearly a
However, not
as to its ad
is no single f

According
multi-purpose
operation wi

cut lube

fortify the
tions.

Lithium
a high m
pumped at
tain their
wide temp
water, resi
have a stru
to flow and
perature.

High Temp

A grease
point is
high tem
such as
throw-out
bearings
lubrication
to brake
brakes on

Ease of
temperatur
sideration
chassis l
pumpabilit
gun manu
developed
manufactu
lithium-soa
compared
ter, sum
grades of
formed o
lime-base

Like any discussion of a relatively new product, this one tends to favor the multi-purpose grease. We are indebted to the technical departments of a number of large refineries who have gone over the manuscript in detail, offered valuable suggestions to enhance its accuracy and readability.

Nearly all are in complete agreement with the findings presented here. However, not all producers of the multi-purpose product are in full agreement as to its adaptability, especially in extreme heavy-duty applications. There is no single formula for solving all lubrication problems.

Accordingly, it is urged that before adopting any particular brand of multi-purpose grease, the fleet operator discuss the problems of his own operation with his grease supplier. . . . The Editors.

cut lube job time, require less equipment investment

fortify the lube oil for other functions.

Lithium soap base greases have a high melting point, may be pumped at low temperatures, maintain their consistency within a wide temperature range, resist water, resist oil separation, and have a structure sufficiently mobile to flow and lubricate at low temperature.

High Temperature Uses

A grease with a high melting point is desirable in extremely high temperature applications, such as wheel bearings, clutch throw-out bearings, water pump bearings to some degree, and lubrication points located adjacent to brake drums of heavy duty brakes on large trucks.

Ease of pumping a grease at low temperature is an important consideration in the acceptance of a chassis lubricant. To test the pumpability of a grease, grease and gun manufacturers have recently developed a standard test. One manufacturer reports that its lithium-soap multi-purpose grease compared favorably with its winter, summer, and year-round grades of grease, and was outperformed only by a winter-grade, lime-base grease at 23 deg F. An-

other grease manufacturer has two grades of lithium-soap grease; one of which can be pumped satisfactorily at temperatures as low as 40 deg F., while the other can be pumped at temperatures as low as 0 deg F. It is apparent that a grease that can be pumped satisfactorily at low temperatures must be capable of performing its lubrication function at those same temperatures.

Water can affect grease in several ways: (1) it can wash it away, or (2) it can emulsify or (3) combine with the grease. For chassis lubricants, it is obvious that high resistance to water wash-out is important. However, the grease must also be able to absorb a limited amount of water without losing its structure so that it does not fail as a lubricant or lose its protection against rusting. Wheel bearing lubricants require this water absorption property, but they must also resist being washed away, since bearing seals in poor condition often do not protect the grease from water wash. Tests by manufacturers have shown that properly inhibited lithium-soap greases equal or surpass the performance of other special purpose greases in both these qualities.

Controlled oil bleeding is the

function of a grease which has been referred to as a "storehouse of oil for the bearings." Too much oil bleeding causes the oil to leak past the seals and may result eventually in a dry bearing. Some bleeding is essential, however, to prevent fretting corrosion damage in heavy duty rear wheel bearings and, of course, to lubricate the bearing.

Oil Bleeding

Hard soap deposits which result from excessive bleeding are difficult to clean and remove. They may also plug up small openings, preventing the entrance of the desired oil. They are also what you see after the oil has leaked away. And they don't look good.

Three other qualities are important to a satisfactory multi-purpose grease, but are not dependent on the metal salt used in the base. Lithium salts in the base do not adversely affect these properties.

Other Qualities

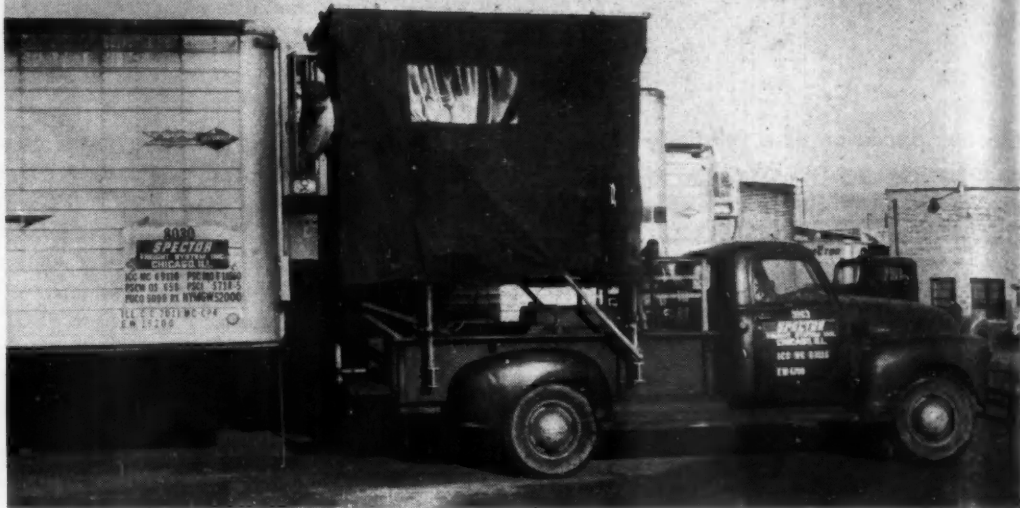
Consistency Stability: This is the ability of a grease to resist softening or hardening under prolonged working. It is an important characteristic of a multi-purpose grease since it influences grease leakage and bearing running torque requirements. This is particularly true for heavily-loaded wheel bearings and other anti-friction bearings in which the lubricant is subjected to continuous working. Tests by grease manufacturers have shown that lithium based greases compare very favorably with standard soda-soap wheel bearing greases in this regard.

Oxidation Stability: Especially at high temperatures, greases are subject to deterioration by oxidation. Lithium-base greases are no more subject to oxidation destruction than other products, but all should be protected by the addition of an anti-oxidant to achieve maximum service.

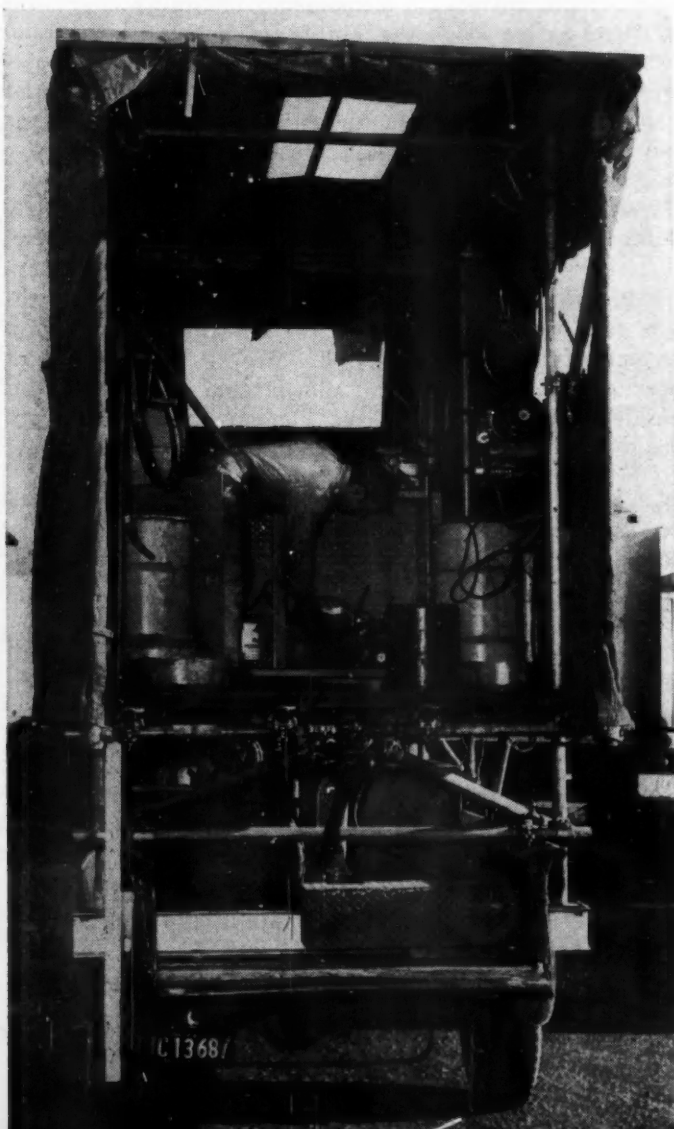
Rust and Corrosion Resistance: In addition to lubrication, a grease is expected to provide corrosion protection to the bearing surfaces. Lithium grease, with its high water resistance, gives a great deal of protection, but even this is often

(TURN TO PAGE 104, PLEASE)

Right. Rig is basically a Chevrolet pick-up plus some steel pipe, Masonite planking and a canvas cover. Below. It is equipped with tools, "hot shot" batteries (under platform), oil and gas supply tanks (behind batteries) and fuel pumps



Portable Rig Speeds Reefer



SPECTOR Freight System, Inc., has eliminated jam-ups in its service garage, and slashed equipment downtime as well, by combining a used pickup truck, some steel pipe, lumber, and canvas with a little shop ingenuity. The result is a portable rig which makes it possible to service refrigerator equipment without spending time and money to move the reefer. The spotter tractor which formerly performed this chore is now freed for other duties.

The portable service unit is installed on the back of a Chevrolet $\frac{3}{4}$ -ton pickup truck. A working platform made of weather-resistant Masonite planking is supported by a 2-in. diameter steel pipe framework attached to the truck body. Around the top and sides of this framework is a canvas cover (for weather protection) with Glassine windows to provide extra illumination.

On the back of the truck, besides the working platform, are a 55-gal oil tank, a 26-gal gasoline tank, and a Briggs and Stratton, 1-hp air compressor. Gas, oil, and compressed air lines lead from these units to the working platform, which measures approximately 5 ft. wide x 8 ft. deep. Battery testers, thermometer gage, and other tools and equipment needed to service the refrigerator unit are stored on the platform.

Spector
cuts me
from p
ber and

Se

When
reefer t
is at a l
chanic to
unit easi
fore stan
a list of
when ex
merely c
form, ju
and driv

Before
went in
years a
faced w
about 1
day. L
shop op
hour ba
time st
load. M
garage's
take ca
six trai

Saves

Comp
provide
equipme
vice on
had to
tractors

COMMER

Spector Freight System saves shop space, cuts mechanic time by taking a shop made from pick-up truck, some steel pipe, lumber and canvas cover right to reefer unit



Mechanic stands on working platform of portable rig to easily drain oil from reefer unit

Service

When the truck backs up to a reefer trailer, the work platform is at a level that permits the mechanic to work on the refrigerator unit easily while standing up. Before starting out, he has obtained a list of units to be checked, so when each job is finished, he merely climbs down from the platform, jumps into the truck cab, and drives off to the next one.

Before the reefer service truck went into operation about three years ago, Spector's garage was faced with the task of servicing about 160 tractors and trailers a day. Despite the fact that the shop operated on a three-shift, 24-hour basis, personnel had a hard time staying ahead of the workload. Main problem was that the garage's three services lanes can take care of a maximum of only six trailers at a time.

Saves Shop Space

Company officials report that, to provide room for all the highway equipment formerly requiring service on an average day, the shop had to finish approximately seven tractors and/or trailers an hour—



Reefer units needing major overhaul are removed from trailer, taken to shop on fork lifts and placed on shop made portable holding jigs

a well-nigh impossible task since many of the jobs required far more than an hour's work.

Of the 160 pieces of equipment that used to run through the garage in a typical 24-hr period, roughly 110 were trailers. Ten of the 110 were reefer units, scheduled for refrigeration equipment maintenance. Thanks to the portable service rig, this part of the shop load has been eliminated. Although the number of trailers requiring garage space has been

reduced less than 10 per cent (from 110 to 100) the benefit produced is actually much greater. For inspections of the refrigerator equipment take anywhere from two to six hours.

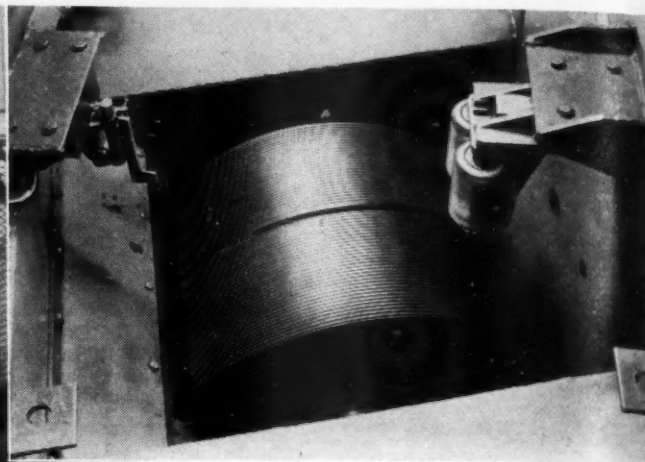
Saves Mechanic Time

Shop space isn't the only thing Spector has saved with its portable servicing rig. Under the old procedure, a mechanic needed between 18 and 22 minutes to locate a spot—

(TURN TO PAGE 144, PLEASE)



Tire cross cutting under a simulated load condition builds in better road gripping ability without sacrifice of life factor



Left. Micro-siper developed by Clayton Meserve automatically cross cuts tires under simulated load conditions

Above. The slicing knife is mounted on this drum. Tire is siped, indexed, lubricated, cooled in one process

Below. Siping is recommended for duals like set at left but not for badly matched and smooth pair at right



Micro-Siping of Tires

Improves Wear and Safety Factors

V MUCH HAS been written on the subject of brake maintenance. However, regardless of how good the materials used and how perfect the maintenance may be, drivers of automotive vehicles must be made to understand that automotive brakes will be only as

efficient as the surface adhesion between the tire and the road. When brakes are fully applied, the tire must be able to grip the road and hold without skidding—to avoid turning the vehicle into a virtual bobsled.



For man
ing with v
to improve
ity. A pate
is known a
designed t
change tha
forced to
forms the
onto a flat
while in it
radius and
cuts are w
the tread
the stretch
separate th
the tread
of stability
of siping
sipes as d
placed clo
cross-cutti
wholly sat

Siping Un

Now, h
crosscut o
as they w
ess is kno
"build in
ability in
(new or v
hicles an
life facto
nesses exi
A vehic

Arrow poi
dicative of





By O. E. Johnson

Brake & Electric Sales Corp.
Somerville, Mass.



Main shop of Brake & Electric Sales Corp. where Johnson does tire siping for several New England truck fleets

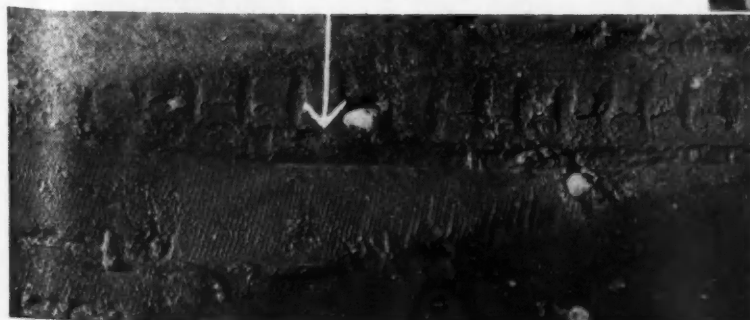
For many years, inventors have been experimenting with various methods of cutting tires crosswise to improve and maintain tractive and stopping ability. A patent was granted as early as 1923 for what is known as tire siping. However, early machines designed to sipe tires made no allowance for the change that takes place when a tire under load is forced to conform to the road surface, which deforms the tire and stretches the inner tread rubber onto a flat plane. When a tire is crosscut or siped while in its normal contour, each cut is a part of a radius and the blocks of rubber formed between the cuts are wedge-shaped. Under such conditions, when the tread is forced to conform to the road surface, the stretching of the inner tread rubber tends to separate the blocks of rubber at their bases, causing the tread to lose density, which results in a lack of stability and rapid deterioration. Older methods of siping tires also prohibited producing cuts or sipes as deep as desired and the cuts could not be placed close enough to take full advantage of the cross-cutting principle. Early experiments were not wholly satisfactory.

Siping Under Load

Now, however, a machine has been designed to crosscut or sipe tires in the same relative position as they would be on the road under load. The process is known as "micro-siping," and will positively "build in" greatly increased tractive or gripping ability in any type tire, any make or tread design (new or used), for passenger cars, commercial vehicles and off-road equipment, without sacrifice of life factor and entirely free of the inherent weaknesses existing with the earlier siping process.

A vehicle equipped with well maintained brakes

Arrow points to pattern left on ground by siped tire indicative of gripping action resulting from cross cutting



and "micro-siped" tires now approaches the ultimate in tractive and stopping ability.

How It Works

We at Brake & Electric became seriously interested in this micro-siping process about two years ago. Innumerable tests and experiments have indicated the proper width and depth of cut for best results, and a final improvement was to change from parallel cross cutting at right angles to the road to parallel cross cutting at a 15 deg angle to improve efficiency. Since installing our first machine a short time ago, we have micro-siped over one thousand truck tires. The reaction on the part of our operator customers has been almost unanimously favorable and enthusiastic.

The micro-siping machine performs the operation of cross cutting automatically. The basic principle
(TURN TO PAGE 132, PLEASE)

Siped tires show hundreds of running inches of sharp edges which contact road like a track-laying caterpillar





\$10 →

Shop Hints

Make a simple drawing of your home-made tools. Take a picture of the shop equipment you have built. Send us a brief description. We will pay \$10 and \$25 to those who submit good ideas for improving maintenance

\$25
↓

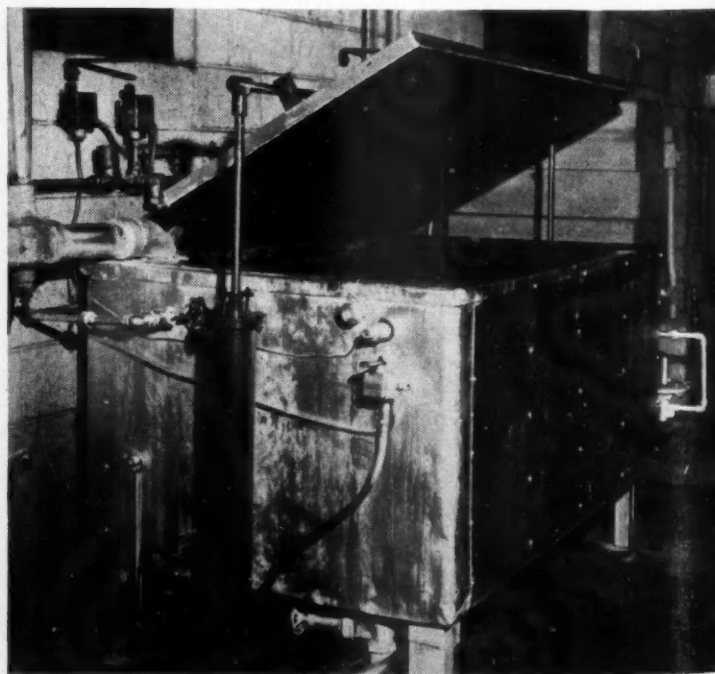
Air Operated Dip Tank Lid

By Claude Timblin, Supt. Maintenance
Youngstown Municipal Railway Co.

Here is a handy device for operating the heavy lids of your parts cleaning tanks. It not only eliminates the chances of someone burning his hands when opening the lid but makes it possible to raise the lid without laying down the parts.

The mechanism consists of a four-inch pipe acting as cylinder, pistons and rods connecting the plungers to the cross shaft on the tank lid. Brackets are welded to the lid and bearings at each end of the cross shaft provide for articulation when the lid is raised.

A door valve (could be an HP Valve) is used for actuation. The shop air supply provides the power.



Two of
a handy se
not needed
They are
into positio

I find t
edges qui
job with a
that I att
the block
necessary.
sharp edg

The wa
part of th
use this h
1/4-barrel
and turn
Weld a h
a 1/2-in.
bottom t
beneath
when rep

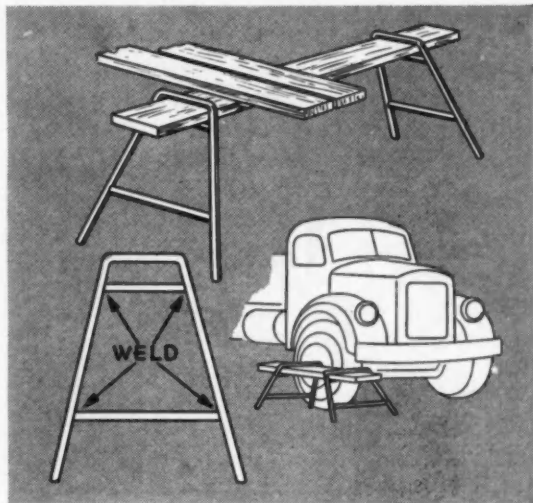
We bu
transmissi
bar are n
cable wit
of old g
from the
by chan
upright f

COMMERCIAL

Shop-Made Frames Are Handy Supports

By Charles H. Willey, Penacook, N. H.

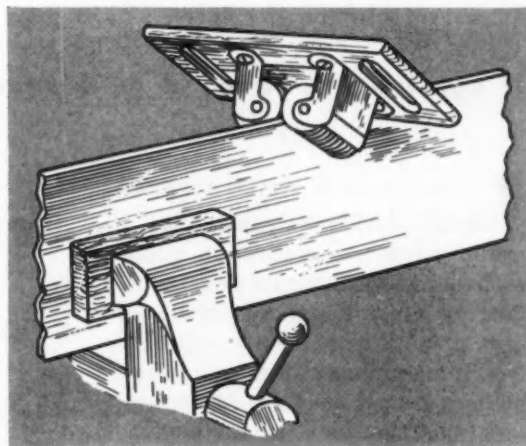
Two of these easily-made supports and a heavy plank provide a handy saw horse or working platform in the fleet shop. When not needed, they are speedily dismantled for compact storage. They are made of 1-in. diameter pipe with the braces welded into position.



Knife Sharpener Deburrs Metal

By Elmer C. Shirey, Fort Wayne, Ind.

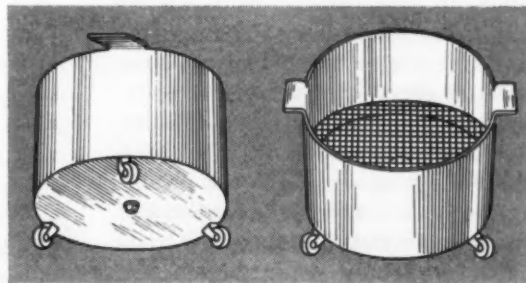
I find this sheet metal burr removing tool smoothes ragged edges quicker and easier. It's also much safer than doing the job with a file. It consists of an ordinary kitchen knife sharpener that I attached to a wooden block. You can cut hand holds in the block for convenience if you want to, but they are not necessary. A few strokes with this tool effectively removes the sharp edges from the metal and makes it safe to handle.



Grease Barrel Cleans Parts

By J. W. McGill, Wright Truck Line, Stayton, Ore.

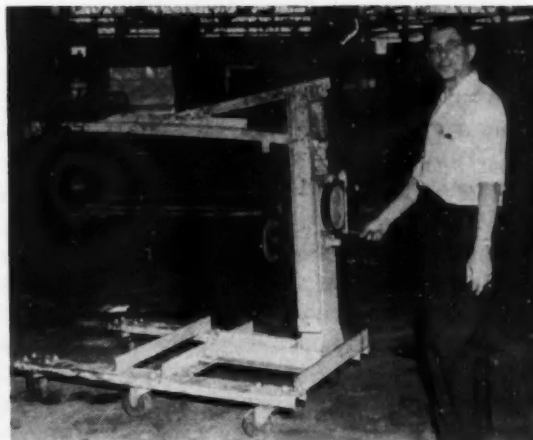
The wash pan of cleaning solvent is an important but messy part of the shop. To eliminate at least a part of the mess, we use this handy small parts cleaner made from an empty grease $\frac{1}{4}$ -barrel. Cut off the top, leaving a pair of ears for handles, and turn back the edge to make a smooth seam around the top. Weld a heavy screen about 3-in. up from the bottom and put a $\frac{1}{2}$ -in. drain plug in the bottom. Weld three casters on the bottom to finish the job. Dirt and other sediment will settle beneath the screen, can be washed out through the drain plug when replacing cleaning solvent.



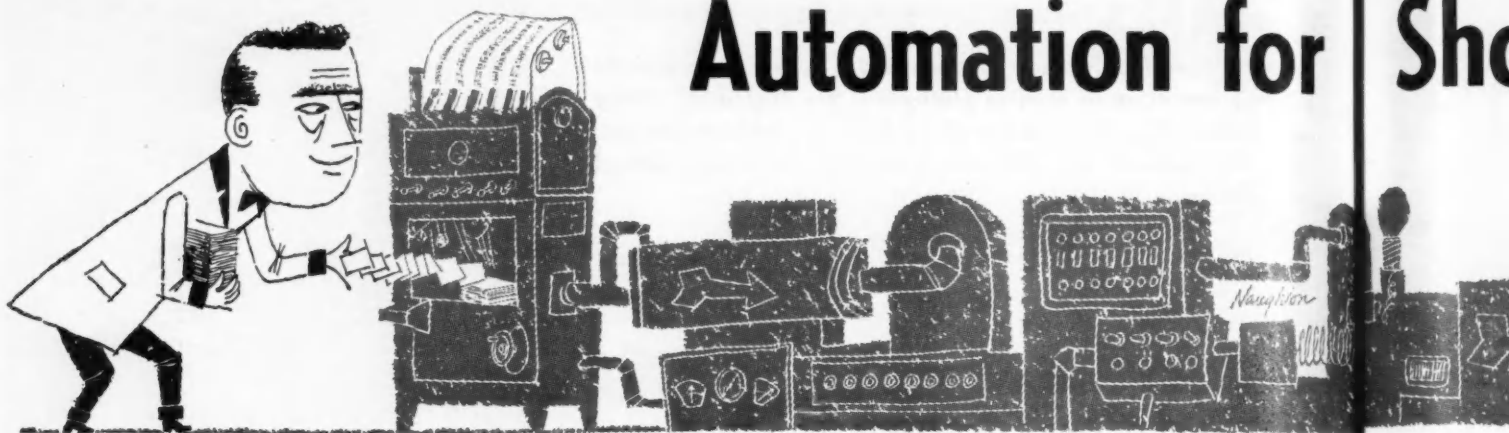
Hoist Handles Engines, Transmissions

From the shops of Intertown Suburban Lines, Dearborn, Mich.

We built this hoist for heavy work—handling V-8 engines and transmissions. Lower and upright framework and the 4-ft hoist bar are made of 4-in. channel iron. Lift is provided by a heavy cable with a hook at the lift end powered by a hand winch made of old gears. When a higher lift is required, the bar running from the uprights and supporting the hoist bar can be shortened by changing the position of the pinion that holds it to the upright framework.



Automation for Sho



It can lead to reduced maintenance cost through tighter controls, less paper work

AUTOMATION can effect a reduction in costs through application to maintenance records, leading towards tighter controls, reduction in paper work, elimination of duplicate clerical effort, increased clerical productivity, and decreased overhead.

Management—armed with the fact-power easily obtainable through automation—is in a good position to formulate policies and decisions which affect earnings and profits. Through this fact-power, bus and truck operators will be better able to discharge their responsibilities to the public and to their stockholders. Effective preventive maintenance may be applied only when permanent records are maintained in order that required maintenance on component units may be performed at specific mileages or dates, and on the basis of recorded data, equipment can be scheduled for inspection, overhaul, and repair.

One Fleet's Experience

Electronic digital computers and data processing machines can take over routine clerical tasks. For several months now one large inter-city bus operator has been studying the application of large scale electronic data processing.

This company is enjoying the

By George T. Stuffebeam

Remington Rand Division
of Sperry Rand Corp.

following benefits from a carefully designed maintenance record system:

1. Greater economy, through the quick detection of trouble in operation.
2. Increased safety in operation.
3. Fewer breakdowns of rolling equipment.
4. A leveled load in the shop, because their control of each bus they operate is such that at any time they can roll one or more in for inspection ahead of schedule if a slow period develops.
5. And in these days of high clerical costs this is certainly not last in importance, a reduction in clerical personnel needed to maintain the records for the preventive maintenance system from five to two.

These benefits have been realized simply from the installation of conventional punched-card system with its inherent advantages of automation.

If a bus runs too long before lubrication or inspection, it can obviously be costly in equipment wear, if not in safety as well. Also,

when a bus which has been consuming two quarts of oil per day suddenly starts eating up ten quarts a day, there is something wrong some place.

Two-Fold Cost

It might be fair to say that few preventive maintenance systems in operation today are geared to spot that bus before at least ten days have gone by. Moreover, in addition to this costly time lag, many record-keeping procedures also waste money because of their inherent inefficiency, and because they fail to deliver the advantages of machine methods. Thus the cost to transit management is two-fold: in terms of wasted supplies and equipment, and in terms of operating overhead.

A good preventive maintenance system will also enable analyses of supplies used to determine which are more economical. One company, for example, found that by using better grades of oil, grease and tools they could reduce costs and spread their inspection periods. Where they used to first inspect at 1500 miles, they now start their checks at 3000 miles.

The same adequate system will detail the work to be performed at each check. At 3000 miles, for example, you would lubricate, check

more cl

brakes, i
doors, saf
At 6000 th
check on t
000 you
tune-up,
ance, go o

Machine

Natural
comprehen
record-kee
use. Unles
exactly ho
since its l
no way of
be brough
your recor
over every
supplies, p
tures, etc
knowing v
more econ

A good
tem woul
card for c
date, bus
and oil co
These car
on a tabu
produces
the inform
cards are
of previou
contain th
for the mo
Each da

For Shop Records



more clerical productivity

brakes, inspect engine, body, doors, safety devices and lights. At 6000 there is a more exacting check on the same points. At 12,000 you might schedule engine tune-up, check engine performance, go over the valves, etc.

Machine Records

Naturally, the key to such a comprehensive system lies in the record-keeping procedures you use. Unless your records tell you exactly how far a bus has gone since its last inspection, you have no way of knowing when it should be brought into the shop. Unless your records permit close control over every phase of maintenance—supplies, personnel time, expenditures, etc.—you have no way of knowing whether areas exist for more economical operation.

A good tabulating machine system would punch a daily record card for each bus, recording the date, bus number and mileage, gas and oil consumption for the day. These cards would then be listed on a tabulator, a machine which produces a printed list containing the information on the cards. The cards are then sorted with the file of previous summary cards, which contain the record for each bus for the month to date.

Each day, these cards would be

tabulated to produce totals for each bus, showing the accumulated mileage and gas and oil consumption to date. At the same time, new summary cards would be automatically punched combining the current day's activity with the previous to-date totals. Then, a quick glance at the report would immediately tell you which buses are due for inspection.

Automatic Control

You can set up an automatic control which eliminates the need for even this quick glance at your report. You can specify, for example, that when the bus is within 250 miles of its next scheduled inspection, the card is to be pulled and the bus put on the schedule for check-up.

Your records would also control engine overhaul, for the cards could be made to include information on engine inspection. Thus, when the total mileage figure reaches your predetermined point, the need for another overhaul is quickly spotted.

Lower Inventory

The fuel usage check, of course, is carried on daily—and your figures are always up to date. Faulty operation is brought to your attention in time to do something about

it—before expensive repair might be required, and before the safety of your passengers might be endangered. It is a simple matter of fact that the company using this system now keeps its consumption record within two or three per cent of inventory, where prior to their use of machine methods they often had a ten per cent difference.

A system such as this would also permit you to use information which you would otherwise have trouble putting together. If you rent your tires, for example, you can have up-to-date figures on tire usage at all times. From your file of punched cards, you can get reports on miles covered per route, per garage, by type of bus, or by divisions—much, much faster than you could possibly get such data by other than machine methods, and much more accurately.

Punched Card Accounting

A justification of tabulating machine methods is an economic one. When you shall have decided to use electronic data processing equipment, you will do so only when you have found such a system to be economically justified. Basically speaking, the fundamental principle of punched card control may be summed up in three words—punch, sort, and tabulate.

But the adaptation of the right machine or battery of machines is not as simple as the basic Punch-Sort-Tabulator procedure implies. There are a number of machines in each of the areas of punching, reproducing, sorting, collating, computing, tabulating and summarizing. These machines are geared, when grouped into a system, to meet your individual requirements and the special characteristics of your operation.

Inventory Control

In the reorganization and setting up of new inventory controls, with emphasis on parts availability to complement an enviable record for its fine safety and performance records, a progressive property streamlined its procedures for maintaining a perpetual inventory, the reordering of parts and material, keeping its investment—
(TURN TO PAGE 108, PLEASE)

New PRODUCTS

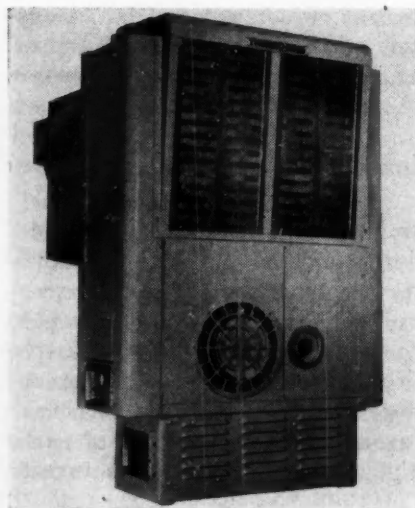
The latest developments in parts, accessories, tools and equipment for the fleet field, described in brief for your convenience

P1. Anti-Seize Compound

Permatex Co., Kansas City, Kan., announces introduction of anti-seize compound Parts No. 404-D. It is formulated for use on threaded connections which are subjected to high temperature and pressure. It conforms to military specifications Mil-T 5544-A (ASG).

P2. Reefer Unit

U. S. Thermo Control Co., Minneapolis, Minn., has available a new reefer designed for use with longer trailers and COE tractors. Called the Thermo King "Pancake" Model KL, it is "flattened" out to make it one-third thinner than the conventional Model K. It can be installed in any type of equipment, not only in combinations using high over-the-engine tractors and close-coupled trailers, but in conventional equipment as well. For present Model K users, the new units are interchangeable. They are available in electric, gasoline, and dual-powered units.

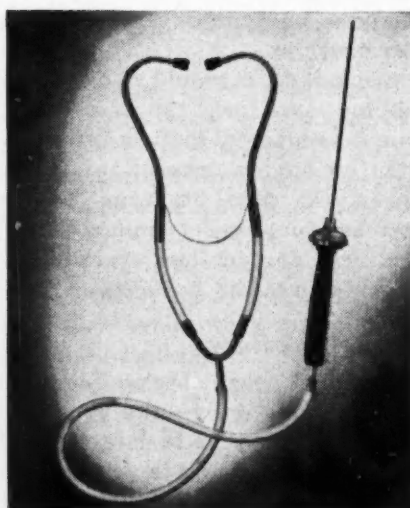


P3. Anti-Freeze

Gulf Oil Corp., Pittsburgh, Pa., announces a "single phase" type, permanent anti-freeze. It features use of a combination of chemical inhibitors, which are self-sufficient for rust control without the aid of oil. These inhibitors are soluble in the aqueous glycol solution forming the base of the product. The anti-freeze represents a complete mixture of the formulation, so that as little or as much as required may be added.

P4. Multiscope

Herbrand Tools, Fremont, Ohio, announces a re-designed "Multiscope." This instrument, which operates like a doctor's stethoscope, has a 7-in. long probe and a more sensitive diaphragm than the former model. It is tuned to the frequency range of the human ear. It pinpoints noise sources to save time in locating and analyzing such conditions as worn gears, and bearings, loose pulleys, piston slap, leaky valves.

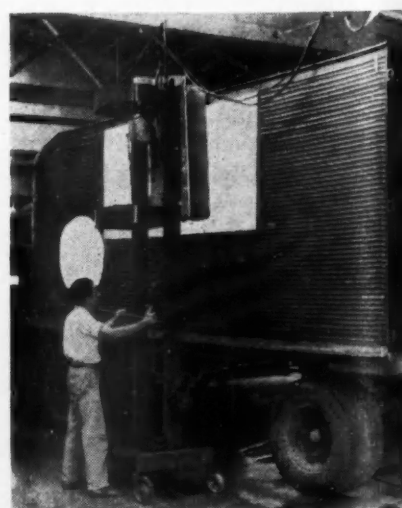


P5. Volt-Amp Tester

King Electric Co., Cleveland, Ohio, announces a new low-cost volt-amp tester for checking voltage and current regulators, as well as the entire primary electrical system, of 6 or 12 volt vehicles. All tests are said to be made in accordance with original equipment manufacturers' recommended procedure. King claims meter accuracy to be closer than 2 per cent of full scale reading.

P6. Vehicle Washer

Ross & White Co., Chicago, announces a low-cost bus and truck washer designed for the large or small fleet owner. It washes while it rolls along, motivated by rotation of its reversible, tilt-conforming brush. Requiring one man to guide the machine as it moves, the largest trailer or bus can be washed in seven minutes or less, says Ross & White. The "Junior Wilson" washer takes up little space and can operate in tight overhead and side clearances.



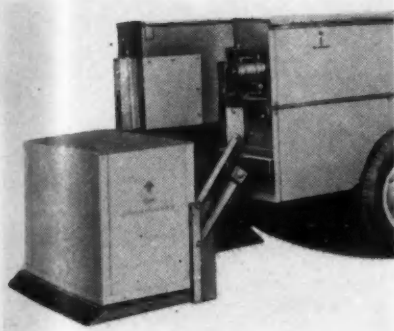
P7. Lift Gate

Hercules Co., Galion, Ohio, announces a lift tail-gate, on 1/2, 3/4 and vice, express designated Model Gate, the new lift tail-gate by the truck the two enclosed is supplied by package consisting electric motor

P8. Oil Filter

Luber-finer, has announced "Luber-finer" filter, designed to 4-gal capacity 363-C, with same simplicity as in the new 272-C, 500-C new model in sealing "O" ring to maintain leak-proofing pressure piece extruded mounting bracket type "Luber-finer" obtain a positive mate the possible





P7. Lift Gate

Hercules Galion Products, Inc., Galion, Ohio, announces a new power-lift tail-gate, suitable for mounting on $\frac{1}{2}$, $\frac{3}{4}$ and 1-ton trucks with service, express or pick-up bodies. Designated Model No. H-6E Load-N-Gate, the new 600-lb capacity power-lift tail-gate is electrically powered by the truck's battery. Power for the two enclosed hydraulic cylinders is supplied by a self-contained power package consisting of a low-voltage electric motor, rotor-type pump.

P8. Oil Filter

Luber-finer, Inc., Los Angeles, Cal., has announced addition of the new "Luber-finer" Model No. 363-C oil filter, designed for engines with up to 4-gal crankcase capacity. The 363-C, with single bolt closure, offers the same simplified pack replacement as in the new Luber-finer models 272-C, 500-C and 750-C. Also, the new model incorporates the positive sealing "O" ring type gasket to obtain leak-proof lid closure at all operating pressures, and the same one-piece extruded steel housing and mounting bracket design. Screw-in type "Luber-finer" pack is used to obtain a positive pack seal and eliminate the possibility of oil by-passing.



P9. Cable Protectors

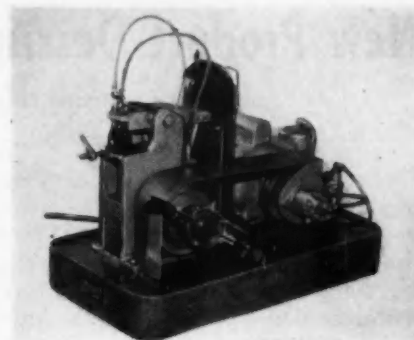
Cole-Hersee Co., Boston, Mass., announces a complete line of "triple-duty" cable protectors for truck-trailer connectors. Supplementing the primary function of protecting cable from jackknifing at its point of greatest wear, they provide a safe, sure, gripping surface for insertion and removal of the plug. In addition, an integral loop is provided to hang the plug and cable safely on the tractor cab when not in use. Cable protectors are available in three sizes and two styles to fit all Cole-Hersee trailer connector plugs. They eliminate using the cable to pull the plug from the socket.

P10. Air Compressor

Pneumatic Division, Curtis Mfg. Co., St. Louis, Mo., has introduced a new gas-engine drive, truck-mounted compressor with increased capacity. The new compressor is equipped with a 55-gal ASME-approved air tank. On the tank is mounted a two-stage compressor, equipped with Timken-tapered roller main bearings, adjustable rod bearings, Curtis' "centro-ring" self-oiling system.

P11. Radio Microphone

Radio Corporation of America, Camden, N. J., announces a new-style mobile radio microphone designed to provide users with quicker, easier, more efficient two-way radio operation. The new device was developed to meet the need for an improved hand-held carbon microphone which nullifies the muffling effect of the hand, simplifies handling holding, and hanging operations, and can be operated with equal convenience in either right or left hand.

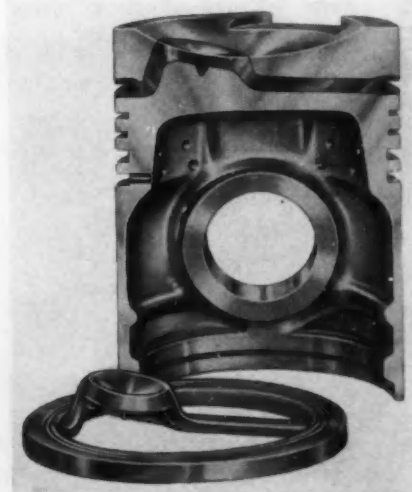


P12. Diesel Tester

Diesel Control Corp., Wilmington, Cal., has developed a new type diesel fuel system testing unit for use in servicing injectors and pumps of General Motors Series 71 engines. The unit is for injector calibrating and running-in. The "Unitest" Model No. U-8000 calibrating fixture is electric motor driven, with a clutch throw-out of the camshaft drive. A locking lever positions the injector to be calibrated and run-in, and automatically connects the fuel-in and overflow lines.

P13. Diesel Piston

United Engine & Machine Co., San Leandro, Cal., announces a new piston designed to solve the problem of "head burning" in diesel engines using direct injection of fuel. Diesel engines using single-point fuel injection frequently suffer from erosion of the crown of their pistons due to the consistent application of heat to a relatively small portion of the piston. In some cases this erosion is so rapid as to burn a hole completely through the head of the piston. The new piston, to avoid this, incorporates in the piston's crown a button or (TURN TO NEXT PAGE, PLEASE)



New Product Descriptions

Continued from Page 85

"hot-spot" of niresist which is "molecularly bonded" to the aluminum body of the piston by the "Al-fin" process. Having a much higher melting point than the aluminum, it does not erode under heat as does the aluminum. "Molecularly bonded" top ring carrier insert is cast integrally with the "hot-spot" button.

P14. Foamed Insulation

American Latex Products Corp., Hawthorne, Cal., has developed a reefer insulation, "Stafoam," that is injected between inner and outer reefer walls. A chemical reaction causes the material to foam, completely filling all voids and cavities and welding itself to the shells as it rapidly becomes rigid. The "Stafoam" used meets rigid EMS Specification 473 (Revision A), has a density of 1½ to 2 lb per cu ft. It is fire retardant, vermin-proof, will not pack or settle under normal pressure or vibration conditions, and is moisture resistant, according to the company. This "Stafoam" formulae has a low thermoconductivity (K factor of 0.19).

P15. Tire Changing Tool

Goodyear Tire & Rubber Co., Akron, Ohio, announces a new hydraulic tire changing tool for earthmoving vehicles. Known as the TO-100, this tool is applicable to all makes and designs of earthmoving rims for either tubeless or conventional tires. The TO-100 consists of three parts—frame, ram and hydraulic pump. The steel jaws of the frame are fastened to the rim of the vehicle, then ram

is placed in frame, with the pointed tip or spade of ram inserted between tire and the rim flange. Pressure is then applied by means of the pump. This forces the spade downward, thus prying the tire bead away from the flange and loosening it from the bead seat.

P16. Food Containers

Can-Pro Corp., Kold Pak Division, Fond du Lac, Wis., features a new reinforced steel bottom with thick shock absorbing rubber cushions on all "Can-Pro" insulated "Kold Pak" frozen food delivery containers. The heavy gage, galvanized steel bottom



is 3½ in. high with double reinforced corners. A steel rod is rolled into top edge of bottom for extra added protection. The bottom is also protected by tempered steel studs, which also act as skids when container is moved.

P17. Shop Sander

SpeedWay Mfg. Division, Thor Power Tool Co., Aurora, Ill., announces a new electric, orbital-motion sander, the Model No. 15T Thor SpeedSander. Either sheet or wet (free) abrasives can be used with the unit. A 4½ or 6½-in. sanded paper is recommended for use with the new tool. With a sanding area 4½ x 5½ in. and weighing only 5 lb, the "SpeedSander" has anti-friction, oil-sealed bearings, direct-connected, air-cooled motor, and cast aluminum body. The motor operates on 115-volt, 60-cycle AC only.



P18. Heavy-Duty Clutches

Rockford Clutch Division, Borg-Warner Corp., Rockford, Ill., announces a new line of clutches specifically for heavy duty clutch service. The new clutches are offered under the trade-mark name of "Morlife." Rockford engineers say field tests show that Morlife type clutches provide more torque capacity and permit the use of smaller diameter clutches and that less lever or pedal pressure is required for engaging and disengaging. Heat dissipation has been improved. The new Rockford clutches are recommended for use only when specifically engineered into the machines in which they are to serve.

P19. Vinyl Decal

Ohio Decalcomania Co., Cleveland, Ohio, is producing a pressure sensitive vinyl decal. Easy application—all that is necessary is to remove the backing sheet and apply like pressure sensitive tape to a clean surface. Large truck marking panels are easily applied by wetting the surface with a cloth dampened with soapy water. They can be supplied in any size or colors. Although it adheres to practically any surface for an indefinite period it can be readily removed.

P20. Trailer Flooring

Revere Copper & Brass, Inc., New York City, have announced lightweight aluminum dry floor and reefer floor sections, both of which feature a locking arrangement to make assembly easy and practically watertight. Locking arrangement is so located in the aluminum reefer floor sections that drainage is prevented from getting into the insulation. The aluminum dry freight floor sections are made in 9 in. widths, weigh less

(TURN TO PAGE 197, PLEASE)



Mid

Mid-State Chicago, i most pro carriers.

Serving States has on the m neering a mean grea

It is lo managem tages that



COMMERCIAL



Mr. Cecil Vernon, president of Mid-States, stands beside a new Mack tractor. One of the industry's most outstanding figures, Mr. Vernon started with one truck twenty-odd years ago, today has an organization approaching a \$20,000,000 annual business, employing over 1,500 people.

another of the **LARGEST FLEETS** buys **MACKS**

Mid-States adds 25 new light-weight Mack tractors to big fleet that serves 13 states

Mid-States Freight Lines, Inc., with general offices in Chicago, is one of the largest, and certainly one of the most progressive, of the country's motor freight carriers.

Serving the industrial heart of the nation, Mid-States has grown to its present size by concentrating on the maintenance of rigid schedules and by pioneering a number of advances in freight handling that mean greater customer service.

It is logical that Mid-States' forward-looking management would realize the outstanding advantages that the new light-weight Mack Thermodyne®

Diesel tractor offers. Consequently, 25 Mack B65LT's have recently been added to the big Mid-States fleet to assure fast, on-time through service for maximum cargo payloads.

A check of the country's foremost fleets would show a "bandwagon swing" to Macks. In fact, major operators *without* modern Macks are becoming increasingly more difficult to find. It would certainly pay you to take a leaf from the leaders' book . . . get the full story on the industry's hottest haulers, the new light-weight Mack tractors with the mileage-champion Mack Thermodyne Diesel engine.

MACK TRUCKS Empire State Building, New York 1, N. Y.



3818

Fleetman's LIBRARY

For free publications included in this list of new fleet maintenance and safety literature, use the reader service postcard

Winter Driving Safety Booklet

"It's Up to You" is a pocket-size booklet full of winter driving safety tips for truck drivers. This is the fourth edition of this publication that summarizes the latest findings of the National Safety Council's Committee on Winter Driving Hazards.

Following an introduction that emphasizes the driver's responsibility for safe driving, the booklet lists seven tips for safe winter operation. Bulk of the booklet expands on these seven tips with sections on visibility, temperature, starting, rolling along, stopping, jackknifing, importance of front brakes, and tire chains. Several charts illustrating stopping distances and stopping times are included.

To obtain a single copy without charge together with prices on quantity orders, circle L1 on the postcard on page 84.

Brake Service Manual

Grey-Rock Division, Raybestos-Manhattan, Inc., has just announced the 11th edition of its Brake Service Manual. The king-size, 60-page book contains complete adjustment procedure on brakes, brake systems and brake system components for trucks, buses and trailers. Also included is passenger car data for as far back as 1934.

The manual is well illustrated with diagrams and drawings to fully explain the brakes and adjustments. It also includes a brake trouble-shooting chart together with instructions on a method of balancing brakes, as well as a chart of legal and actual stopping distances for each state.

To get your free copy of this handy shop manual, circle L2 on the postcard on page 84.

Modern Lube Oil Review

Here's a booklet you'll want to read and keep handy. Published by the Texas Co., "Modern Oils for Modern Engines" will help fleetmen bring up-to-date their lube oil preventive maintenance programs as well as give them many pointers in selecting the best oil.

After reviewing the lube characteristics of today's engines, it discusses modern oil additives and their purposes. Best section of the booklet is devoted to deposits

and wear, discussing these under low and high temperature operation.

For your free copy, circle L3 on the postcard on page 84.

Carbon Dioxide Welding Data

Air Reduction Co. has made available this report on carbon-dioxide shielded, consumable-electrode arc welding. It describes the techniques of advantages of this process for welding alloys of aluminum, magnesium, copper, nickel and titanium, stainless, low-alloy and carbon steel.

Circle L4 on the postcard on page 84 for a free copy.

Truck Tax Report

Fleet operators are acutely aware of highway use taxes. This brief report on vehicle taxation in Michigan gives some interesting operating data (empty and loaded weights, annual miles of travel, fuel consumption) as well as annual taxes paid in Michigan for 12 different rigs.

Especially interesting are actual fleet examples of interstate operation between Michigan and Ohio that illustrate the impact of Ohio's axle-mile tax.

For your free copy, circle L5 on the postcard on page 84.

ATA Services Catalog

American Trucking Assns. has just made available its 1956 catalog listing the services and supplies available to aid in fleet operation efficiency. Included are prices and descriptions of ATA's safety, labor relations, accounting, tariff and traffic, freight claims, public relations services.

Circle L6 on the postcard on page 84 for your free copy of ATA's 1956 catalog.

Light Truck Fan Belt Guide

This 4-page chart, just made available by Raybestos Division, Raybestos-Manhattan, Inc., lists fan belt, hose and floor mat specifications for light trucks and passenger cars, including 1955 models. It is printed on heavy poster board, measures 12 x 18 in.

For your free copy, circle L7 on the postcard.

(TURN TO PAGE 102, PLEASE)

**HERE'S HOW
you too can**

REDUCE BATTERY COSTS

WITH

**National
KATHANODE**



BUS



TRUCK



DIESEL



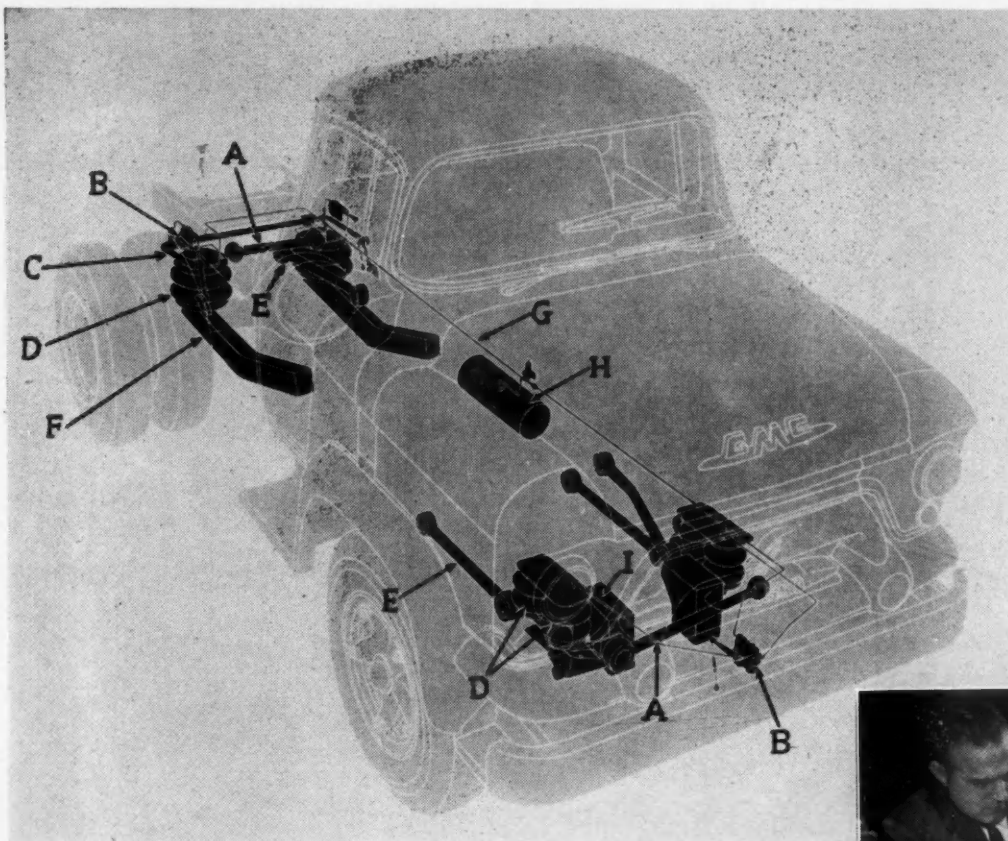
Multi-Power BATTERIES

Just by using a simple checking system which we have developed, you prolong the life of your batteries—improve their performance.

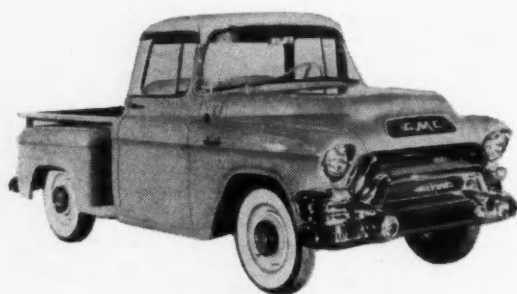
This system is available to you without cost or obligation. Call your National jobber now—he will arrange a date when our special representative can put this system to work for you.

Gould-National BATTERIES, INC.

ST. PAUL 1, MINNESOTA



Left. Schematic view of experimental air suspension showing lateral stay bars (A), leveling valves (B), sway bar (C), air bellows (D), torque rods (E), air beam (F), air line (G), air storage tank (H), air chamber (I). Below. Fixture used by GM to test air bellows on the bounce



GMC Shows New Axle and Suspension Systems

A wide-range one-shift transmission, an air spring system for trucks, and a new road damper for front wheels are displayed at the Chicago Auto Show

AT TH
& Coach D
truck mode
to show the
development
truck indu

A new v
road shock
duty tract
spring sus
time.

Road Sho

Road sho
wheels, co
weights th
consists of
lb steel we
The weigh
the cylind
justed so
opposes th
periods of

Road te
dampers t
easier. Ri
it is feasi

The dar
ment at ex

Wide Ran

The wid
ratio with
full advan
vehicle fr
is said to
reaches c
as to perm
one shift
Matic or r

When c
the axle i
shifts are
without s
the axle,
without s

This d
highway
ditions d
loads. Th
equipment
others.

Air Ride

One of
riding co
sion, intr
experime
spring su

COMMERCIAL

AT THE Chicago Automobile Show, GMC Truck & Coach Division will have an exhibit of its current truck models as well as animated displays designed to show the operational features of some new product developments characterized as "firsts" in the motor truck industry.

A new wide-range one-shift rear axle; a line of road shock dampers for light trucks; and a heavy duty tractor equipped with an experimental air-spring suspension will be on display for the first time.

Road Shock Dampers

Road shock dampers are mounted behind the front wheels, counteract road shock by means of "floating" weights that slide within the cylinder. The damper consists of an 11.8 x 4.4-in. cylinder, containing a 12-lb steel weight sandwiched between two coil springs. The weight slides along a rod running the length of the cylinder. Tension of the springs has been adjusted so that vibration frequency of the weight opposes the frequency of the front wheels during periods of bounce or vibration.

Road tests have shown that trucks equipped with dampers turn corners, negotiate washboard roads easier. Riding comfort is improved additionally since it is feasible to use softer suspension leaf springs.

The dampers will be available as optional equipment at extra cost on all 100 Series GMC trucks.

Wide Range Rear Axle

The wide-range, one shift rear axle has a low gear ratio with as much as 18 to 1 reduction for taking full advantage of engine torque in moving a heavy vehicle from a dead stop; and a high gear ratio that is said to assure peak performance when the vehicle reaches cruising speed. These ranges are so designed as to permit progressive gear combinations with only one shift of the axle when used either with Hydra-Matic or manual shift transmissions.

When combined with manual shift transmissions, the axle is said to eliminate split shifting. Four gear shifts are available in the low range side of the axle without shifting the axle. At that point, by shifting the axle, four speeds are available in high range without split shifting.

This device is particularly important in off-highway truck operations where poor driving conditions demand more usable power to move heavy loads. The new axle will be available as standard equipment of many GMC truck models, optional on others.

Air Ride Suspension

One of the displays will show the improvement in riding comfort through the use of air spring suspension, introduced in GMC motor coaches in 1952. An experimental truck tractor model equipped with air spring suspension indicates that GMC will undoubt-

edly make air spring suspension available in its motor truck line some time in the near future, after the experimental program has been satisfactorily completed.

Mounted between the axles and frames of an F552 duo-purpose tractor with a 48,000-lb gross combination weight and a 35-ft-long maximum volume van-type trailer, the suspension system has 10 rubberized tire-fabric bellows filled with compressed air.

As the bellows flex under the jarring impact of road shocks, they are said to form a cushion between the axles and the body, absorbing heavy jolts and virtually eliminating high-frequency vibrations that wear out the tractor and trailer.

As the moving parts of the truck suspension system are rubber-mounted, they require no lubrication and function noiselessly. This eliminates many maintenance operations and materially reduces servicing expenses.

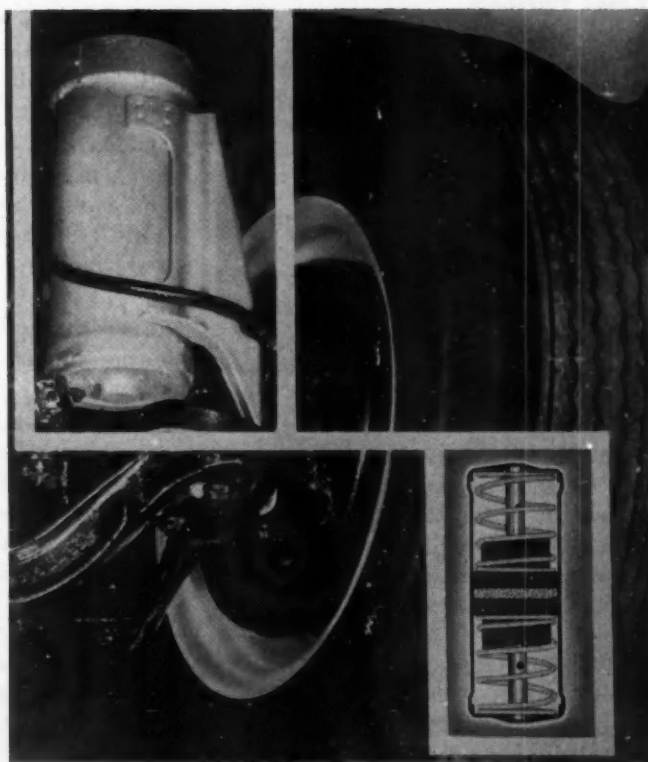
Constant Frame Height

Due to the design of the system and the method of metering air to the bellows, the frames of the tractor and trailer remain at a constant height even under full-load conditions.

Even with a partial load located to one side of the trailer, the floor remains level because the air springs on that side of the trailer automatically are subject

(TURN TO PAGE 122, PLEASE)

Harmonic damper mounted on backing plate of front wheel. Cutaway shows how road-smoothing device works. Sliding weight mutes vibrations and tends to keep front wheels in contact with road at all times



Lighting Standards for Trucks and Trailers

The Equipment and Maintenance Council of ATA recommends standards in wiring, candlepower and lamp location that will provide uniformity and increased safety

WHAT WILL be known as one of the most important safety steps taken in years is now a specifications recommendation from the E and M Council of ATA. Standards for truck and trailer lighting systems, long sought in the industry, are now on record after intensive study by the council as well as other engineers and wiring experts.

The new standards promise improved safety, reliability and a uniformity long sought by fleetmen. It is expected that these standards will be observed both for the rewiring of old trailers and as specifications for the manufacture of new equipment.

Light Patterns

An important phase of this development is the light patterns for front and rear of bodies which will convey to traffic the shape and dimensions of the vehicle. The standards are produced in two parts. One section covers dimensions and design specifications of lamps and reflectors. Another section sets up wiring specifications designed to provide standardization and ease of maintenance for truck and trailer lighting.

All lamps will conform to minimum specifications prescribed by the Society of Automotive Engineers. In order to control standards, the council specifies that upon request the lamp and reflector manufacturers must submit a report from an approved commercial laboratory indicating that their products meet all of the SAE requirements pertaining to color, vibration, corrosion, beam candle-

power output, and moisture and dust sealing qualities.

Lamps and Reflectors

Lamps covered in this recommended practice must include the following construction features:

1. Non-corrosive, non-ferrous sockets.
2. Acrylin resin plastic lenses.
3. Synthetic rubber and/or combined synthetic rubber and ground cork gasket between vehicle and lamp mounting base.
4. Marker and clearance lights with a maximum mounting dimension, base to outermost projection of the lamp assembly of not more than 1 in.
5. No less than 16-gage pig-tail wires in accordance with SAE thermo-plastic insulation specification.

Reflex reflectors must meet SAE requirements and must have a minimum effective diameter of 3 in. All reflex reflectors shall be made of acrylic resin plastic. Class B reflectors cannot be built into the combination stop-tail and/or turn signals lamps.

Lamps and reflectors, according to the recommendations, shall be securely mounted as close to the sides, top, front or rear, whichever

the case may be, so as to mark the outer extremities of the unit within limits practical to the consideration of the structural design.

Clearance, Marker, Turn Lamps

These lamps shall conform to SAE specifications. A combination clearance and side marker lamp may be used so long as it fulfills the requirements for each as contained in these standards and meets ICC specifications and state laws. The three identification lamps specified in the standards shall be spaced not less than 6 nor more than 12 in. apart, measured from center to center of lens.

Front turn signals shall be of the double-faced Class A, Type 1. Turn signals must be wired in such a manner that they will flash simultaneously to indicate vehicle disability.

Wiring Specifications

The council recommends in this standard that new trailers or bodies being purchased or old units being repaired should be equipped with 12-volt lighting systems. Operators whose circumstances require 6-volt will equip their trailers to be interchanged with a fixed value resistor wired
(TURN TO PAGE 142, PLEASE)

You may find the cause of down-time in a pint of used motor oil

**Just give it to Pure Oil and get a
free engine analysis**

By carefully analyzing just one pint of used motor oil, Pure Oil scientists can give you a complete report on the internal condition of your fleet engine. This may save you a major engine overhaul. It may tell you how to cut operating costs and increase efficiency, too.

Pure Oil usually offers this free service only to regular users of its products. But to show you how valuable it can be to your operation, we're now offering a free engine analysis to all fleet operators within PURE'S 24-state marketing area. No obligation, of course.

Call your nearest Pure Oil office or mail the coupon for information on how to submit your sample of used oil.

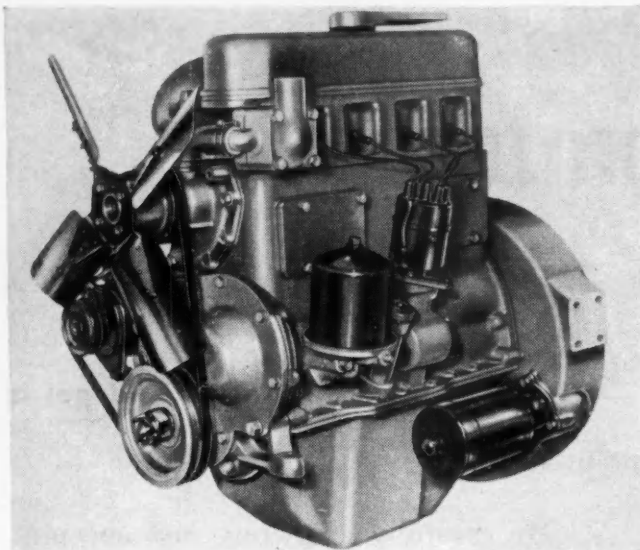
**Sales offices located in more than
500 cities in PURE'S marketing area.**



BE SURE with PURE

The Pure Oil Company, Dept. CC-61
35 East Wacker Drive, Chicago 1, Illinois
Without cost or obligation, please send me information
on how I may obtain a Pure-sure Analysis of my used oil.

Name _____
Title _____
Company _____
Address _____
City _____ Zone _____ State _____



Hercules OHV Engines

HERCULES MOTORS CORP., Canton, Ohio, has added to its family a line of 4 and 6-cyl overhead valve engines. They are designed for maximum interchangeability of basic parts, are being made available for use with gasoline, gas, LP gas or diesel fuel.

Diesel versions will be for industrial and marine use with a limiting top speed of 2000 rpm. This does not rule out use of these engines for vehicles at a later date.

Installation dimensions are the same for the group of four-cylinder engines, and the same among the six-cylinder engines. As will be noted in the specifications table, all of the engines in this family have a common stroke—4½ in.—and thus provide interchangeability of piston and connecting rod assemblies between 4- and 6-cyl gasoline engines of the same bore. There is similar interchangeability between diesel engines of the same bore. Connecting rods are the same for all engines. Crankshafts and main bearings for 4-cyl engines are the same, while the 6-cyl crankshafts and main bearings are the same for all sixes.

In keeping with Hercules' design practice the 4-cyl engines have five main bearings, the sixes—seven main bearings. This provides for ample bearing capacity, crankshaft rigidity, and structural strength in general to permit use of the basic structure for the heavier loading of diesel service. In its initial planning Hercules was faced with two obvious choices—a heavy basic design based upon the maximum requirements of the dieselized version in which the gasoline versions would be penalized from the standpoint of weight and size, or a compromise in design to favor the gasoline version. In electing the latter course of design, Hercules decided at the start to tailor the diesel version initially exclusively for industrial and marine applications.

Hercules OHV Specifications

Model No.	No. of Cyl.	Bore & Stroke (in.)	Disp. (cu in.)	Hp (max)	Torque (lb ft)
GO 173	4	3½ x 4½	173	67 @ 3200	138 @ 1400
GO 198	4	3¾ x 4½	198	76 @ 3200	159 @ 1400
GO 226	4	4 x 4½	226	87 @ 3200	182 @ 1400
GO 260	6	3½ x 4½	260	102 @ 3200	208 @ 1400
GO 298	6	3¾ x 4½	298	114 @ 3200	240 @ 1400
GO 339	6	4 x 4½	339	131 @ 3200	272 @ 1400

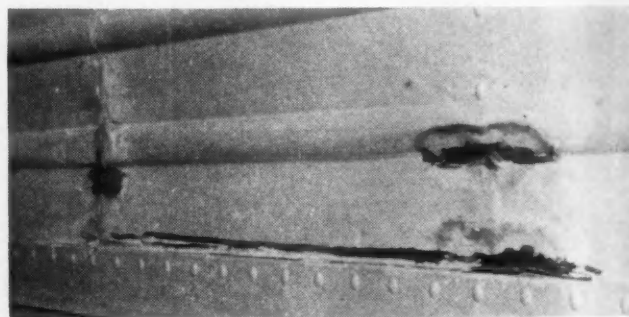
Permacel's Body Repair Tape

PERMACEL TAPE CORP., New Brunswick, N. J., has come up with a new pressure-sensitive tape for making truck trailer body repairs—permanent for smaller tears or temporary for larger ones in the body skin.

The tape is an aluminum foil laminated to a strong cotton cloth with a rubber-based pressure-sensitive adhesive. Permacel says the tape is weatherproof, will not loosen from vibration, sticks on any metal, is flexible, and can be painted.

This unique tape, Permacel 12-A Body Repair Tape, was originally developed by Permacel about two years ago as a sound damping material for sheet-metal panels in aircraft, automobiles and metal furniture. In its new application, when a metal panel sustains a break or puncture, or when seams open, the damage is easily and permanently repaired in little more time than it takes to refuel the truck.

First, the metal surface is thoroughly cleaned. (Carbon tetrachloride or gasoline can be used.) Next, a piece of tape long enough to cover the hole is cut from a roll and placed over the area. It can be smoothed out with a pencil, knife handle, cigarette lighter or any hard, smooth object. The application of pressure over the surface of the repair assures excellent adhesion to the metal. By buffing stainless steel or bright aluminum surfaces lightly with 0000 or 000 steel wool, an excellent high finish can be obtained on the repair. Because it is flexible, the body repair tape is good for breaks in a rounded sur-



face such as ribbed panels. It will follow the contour of a curve, making the repair almost invisible.

Excessive washing with strong soap may loosen the adhesive. However, if the edges are beveled out carefully when the repair is made, soap cannot reach the adhesive. If soap should loosen the tape, the same piece can be reapplied after wiping the metal surface dry.

For further details on this new tape, circle P 39 on the postcard on page 84.

pe

. J., has
or mak-
smaller
n.

a strong
tive ad-
will not
ible, and

ir Tape,
ears ago
annels in
its new
or punc-
sily and
it takes

l. (Car-
, a piece
m a roll
out with
y hard,
the sur-
ne metal.
surfaces
ent high
flexible,
ded sur-

contour

osen the
out care-
each the
me piece
dry.

P 39 on

ary, 1956



A million miles from nowhere when "just like that" the rig started to act up. Probably nothing to worry about, but Joe was a good driver. Careful. So he stopped . . . grabbed his warning flares . . . opened the cab door and . . . He had no chance to warn approaching traffic that his truck was disabled. The minute he stopped, *there was*

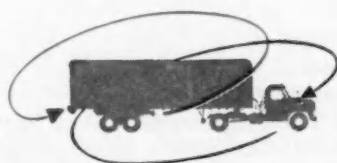
DEATH'S TARGET

And it's all so unnecessary.

A flick of the *Signal-Stat Sigflare* switch on the steering post eliminates this threat of death and destruction on the highway by instantly providing disabled vehicles with positive *all around* protection. *Sigflare* goes to work even *before* your driver opens the cab door. He just snaps the *Sigflare* switch and *all 4* signal lamps flash a simultaneous *on* and *off* warning signal that alerts and slows down oncoming traffic. Only *Sigflare* provides this extra safety feature as part of

its multi-purpose signal system . . . a new concept in *all around* protection for disabled vehicles that also provides: Stop lights as powerful as Class A signal lamps . . . tail lights as powerful as the law allows . . . the most powerful directional signals on the market.

Sigflare accomplishes 4 vital signaling functions with just 4 lamps and 1 switch. For further details on this economical, *all around* protection for vehicles, see your authorized *Signal-Stat* distributor or write to:



Signal-Stat

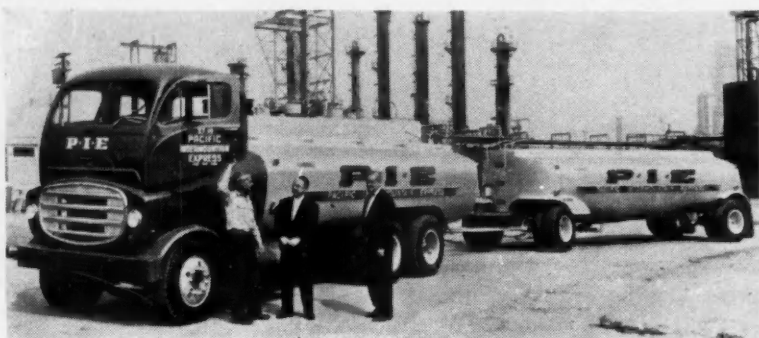
DIRECTIONAL SIGNALS • SWITCHES • FLASHERS

Signal-Stat Corporation, 523-539 Kent Ave., Brooklyn 11, N.Y., U.S.A.

Insist on *Sigflare* for all around signaling protection

LAMP LENSES SHOULD BE KEPT CLEAN FOR GREATER SAFETY

COMMERCIAL CAR JOURNAL, January, 1956



Fruehauf-PIE Tank Truck

A NEW FRAMELESS TANK TRUCK and trailer combination has just been introduced by Pacific Intermountain Express Co. and Fruehauf Trailer Co. The new tank truck employs no frame or mounting sill. Power package, wheels and axles are built within the tank itself.

Its radically new design has dropped the center of gravity and made the tank eight inches wider than it is high. (See rear-end comparison picture at right.) This gives a marked improvement in roadability and safety. Driver enjoys "control tower" vision (see above), which, by placing him in a higher position, affords him complete 360 deg vision, a safety factor said never before accomplished with tank trailers. Driver can actually look down over the top of his tank and see traffic on the lane to his right.

So far the first unit has been considered as a pilot model and is being put on the road by P.I.E. to thoroughly test and explore the possibilities of this method of construction. Fruehauf engineered the entire project and built the integrated tank and frame assembly which includes tank, axles, engine and running gear all integrated into one unit. P.I.E. furnished the power train and cab fittings and installed these components.

Engine and transmission are in a single unit mounted on sliding rails so arranged as to be completely replaceable in two hours (above, right).

Fruehauf says the new "Tank of Tomorrow" will be built as a complete unit and delivered to the truck manufacturer in any state of finish stipulated.

Tank truck holds 4250 gal, net capacity. With the trailer's 4750 gal, total payload capacity is 9000 gal.

Dromedary for HHG



Here's an interesting combination for household goods recently put into service by National Van Lines, Chicago. It features a standard 28-ft mover's semi-trailer, a dromedary-type cab on the tractor with 15-ft long load space. The whole rig stays within a 45-ft limit, gets 24,000 lb GCW. Back of the dromedary is contoured to fit with round nose on trailer. It is said to have 10 per cent more capacity than conventional units.



Clayton's New Muffler

A NEW AUTOMOTIVE MUFFLER said to eliminate more than 95 per cent of the hydrocarbons passed into the atmosphere from unburned and partially burned fuel, has been developed by the Clayton Mfg. Co., El Monte, Cal. First of the new units to be placed on the market will be for gasoline-driven, heavy-duty, truck and bus engines in the range of 550 to 750 cu in. piston displacement.

Development work is under way on models for several popular makes of passenger cars and also for certain types of Diesel powered equipment.

In the new muffler, the stream of exhaust gas from the engine sucks in sufficient air (oxygen), to cause combustion of the unburned or partially burned fuel carried into the exhaust system during the normal operation of the engine. Means are provided for positive ignition of the unburned gases.

Muffler contains no catalyst or other similar substance which would deteriorate in service. Though slightly larger, it will be interchangeable with production mufflers now in service. Because of the fine alloys necessary to withstand the high temperatures generated in the combustion process, they will stand up much longer in service.

Clayton Clearair Muffler Co. will handle sale and distribution of the new muffler, which will be marketed under the name of the "Clayton Clearair Muffler."

Several of the new mufflers are in service on buses operated by the Los Angeles Transit, the Portland (Oregon) Traction Company, Long Beach Motor Bus, Los Angeles School district, Tanner Motor Livery, and Metropolitan Coach lines.

For further data on Clayton's new muffler, circle P 40 on the postcard on page 84.

Snap-on^{*} **specials...**

LIKE THIS INEXPENSIVE DOOR HANDLE TOOL



— save you time and money



The *Snap-on* DHP-8A door handle tool provides mechanics and body men with a fast, easy way to remove door and window lift handles on General Motors cars. This inexpensive tool does the job in seconds . . . saving minutes and money every time it's used.

The *Snap-on* dealer who calls on your shop has a great many other specials available, each one designed to do some difficult-to-service job on late model cars — faster — easier — more profitably. It's regular procedure with *Snap-on* to introduce new specials to shop owners and mechanics. It's

Snap-on's way of helping you turn out more work while building greater good will with your customers.

It's good business to invite the *Snap-on* man, welcome him, endorse him. You'll be in good company — for in thousands of shops everywhere *Snap-on* is part of the crew. Service managers like him. Mechanics like him.

Talk to the *Snap-on* man the next time he calls. He'll explain how you can help put profit-making specials or standard *Snap-on* tools into the hands of all your mechanics.

*Snap-on is the trademark of Snap-on Tools Corporation.



SNAP-ON TOOLS CORPORATION

8026-A 28th Avenue, Kenosha, Wisconsin

JANUARY NEWS ROUNDUP

WASHO Road Test

Rail attempts to discredit favorable findings of the WASHO Road Test (Dec. '55, page 80) will be based on the pitch that test conditions were not typical except for similar limited areas in the intermountain states, i.e., high altitude and low annual rain and snowfall. Meanwhile, the American Assn. of Railroads has asked the Highway Research Board for permission to have an observer at the WASHO Road Test in Illinois. Construction of the roadway for this test is scheduled to begin this year with actual testing to start in 1957.

Trailer Developments . . .

In Edgewater Park, Miss., Jan. 21-25, the Truck-Trailer Manufacturers

1955 Domestic Truck Factory Sales by G.V.W.*

	5,000 lb. and less	5,001-10,000	10,001-14,000	14,001-16,000	16,001-19,500	19,501-26,000	Over 26,000	Total
January	37,040	12,271	3,300	12,015	3,178	2,552	3,591	73,947
February	25,500	9,113	2,319	9,045	2,808	2,658	3,810	55,253
March	43,294	14,454	3,543	14,836	2,671	2,748	4,514	88,060
April	55,955	17,933	4,146	19,041	3,926	3,572	5,603	110,176
May	54,231	17,092	4,345	19,397	4,269	3,290	5,738	108,362
June	47,614	16,615	3,576	18,591	5,302	3,803	6,124	101,625
July	42,482	14,883	3,261	19,206	5,055	3,766	5,086	93,739
August	37,218	12,508	2,648	16,304	3,381	3,025	4,993	80,077
September	41,149	12,053	2,751	11,673	2,672	2,260	4,293	76,851
October	45,821	14,012	3,233	9,296	2,438	2,075	4,515	81,390
Total—10 Months—1955	430,304	140,934	33,122	149,404	35,700	29,749	48,267	867,480
Total—10 Months—1954	328,395	127,564	27,166	117,434	26,736	32,931	30,595	690,821

* Automobile Manufacturers Association.

Assn. holds its annual meeting. Opening feature will be a panel discussion on trailer - ships, containerization, piggy-back and air freight. Professor Marvin J. Barloon, Western Reserve University, is scheduled to present a 1956 trailer industry forecast. It will be followed by a discussion on trailer financing. American Trucking Assn.'s President C. J. Williams will be a featured luncheon speaker with a discussion of the Transport Policy Report and its implications for the trailer industry.

. . . And Industry Problems

Also on the program are discussions of double draft weighing of tandem axles, ICC emergency brake requirements, the WASHO Road Test and refrigeration problems. Another featured speaker will be Western Highway Institute Executive Director

John L. Springer, who will review legislative developments in the western states affecting highway transport.

Private Carriers Meet

Early next month, Feb. 9-10, Private Truck Council of America holds its annual convention in Cleveland, Ohio. J. W. Sinclair, Manager, Automotive Dept., Union Oil Co., will speak on "Privately Operated Trucks—Their Place in an Expanding Economy." Other program subjects include the Transport Policy Report, the highway program, Ohio's axle mile tax. Truck makers and truck users will trade ideas in a "Manufacturer Meets Consumer" panel.

State Legislatures

Fleet operators not under ICC jurisdiction. (TURN TO PAGE 150, PLEASE)

42-Year Old Autocar



Russell Sheldon, former national rodeo champion truck driver, tries his hand at the wheel of this 1914 Autocar which served as the novel pacemaker car in the recent ATA Annual Truck Rodeo. Standing by are J. I. Davidson, secretary of the Davidson Transfer & Storage Co., Baltimore, Md., and G. D. Sontheimer, rodeo director and safety supervisor of the American Trucking Assns. The Autocar still is in running condition despite its 42 years and retraced its original route from Baltimore to Washington in 3½ hours.

Third Quarter Truck Tonnage*

Region	Third Quarter 1955	Third Quarter 1954	Per Cent Change
New England	3,204	3,351	- 4.4
Middle Atlantic	14,298	12,666	+12.9
Central	23,216	19,181	+21.0
Southern	8,605	7,293	+18.0
Northwestern	3,526	3,210	+ 9.9
Middlewestern	4,145	3,824	+ 8.4
Southwestern	6,039	4,897	+23.3
Rocky Mountain	2,882	2,536	+13.6
Pacific	8,820	7,829	+12.7
United States	74,737	64,786	+15.4

* In thousands of tons. Reported by ATA Research Dept.

With 1955 third quarter tonnage 15.4 per cent above last year, ATA's third quarter truckloading index was reported at a record high of 165 by the ATA Research Dept. Previous third quarter high was in 1953 when the index reached 154. 1954's third quarter index was 143. The report, based on tonnage data from ICC Class I common and contract carriers, showed the following percentage increases for the various commodity groups; general freight—13.4, household goods—15.5, heavy machinery—30.5, liquid petroleum—12.8, refrigerated solids—17.3, refrigerated liquids—7.5, agricultural commodities—11.3, motor vehicles—51.4, building materials—17.5, all others—17.5.

Bendix Products Division

A good reliable source

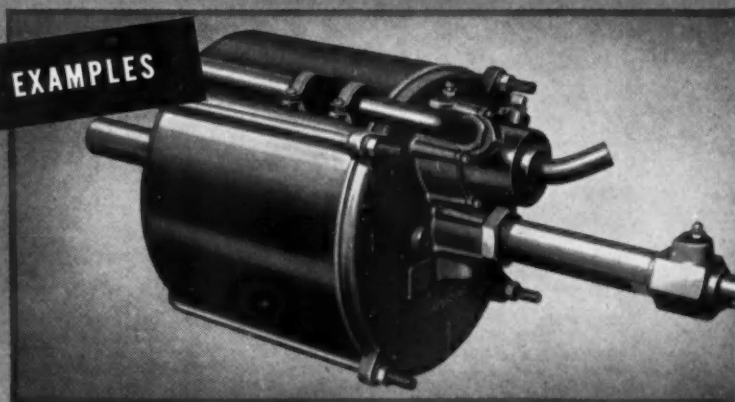
FOR AUTOMOTIVE EQUIPMENT

From four wheel brakes to the latest development in power braking, Bendix Products Division has demonstrated its unique ability not only to keep pace but *actually to anticipate* the industry's requirements for the latest and most efficient in automotive components.

TYPICAL EXAMPLES



BENDIX LINKAGE TYPE POWER STEERING—Because Bendix* Power Steering is of the linkage type, manufacturers find it specially adaptable for production line installation without extensive engineering changes. Manufacturers can now meet the ever-increasing demand for power steering more efficiently and more economically with Bendix Linkage Type Power Steering.



BENDIX HYDROVAC POWER BRAKE—With over four million in use, the Bendix Hydrovac* is the world's most widely used power brake for commercial vehicles. This overwhelming preference for Hydrovac is a result of sound engineering design, exceptional performance, low original cost and minimum service upkeep. Make the industry's choice your choice.

*REG. U. S. PAT. OFF.

BRAKES • POWER STEERING • POWER BRAKING • CONSTANT VELOCITY UNIVERSAL JOINTS • HYDRAULIC REMOTE CONTROLS

BENDIX PRODUCTS SOUTH BEND INDIANA
DIVISION DIVISION OF

Bendix
AVIATION CORPORATION

Export Sales: Bendix International Division, 205 East 42nd Street, New York 17, N. Y.

Tota
73,947
55,253
86,060
110,176
108,362
101,625
93,738
80,077
76,661
81,390

867,480
690,821

review
ne west-
trans-

10, Pri-
ca holds
eveland,
r, Auto-
o., will
Trucks
g Econ-
ects in-
Report,
's axle
d truck
anufac-

CC jur-
(E)

er Cent
Change

- 4.4
+12.9
+21.0
+18.0
+ 9.9
+ 8.4
+23.3
+13.6
+12.7

+15.4

t.
ve last
ported
Dept.
index
t. The
ommon
centage
general
nery—
—17.3,
—11.3,
others

y, 1956

1955 New Truck Registrations by Makes by States*

STATE AND MONTH	Brookway	Chevrolet	Diamond T	Dodge	Ford	G.M.C.	International	Mack	Reo	Studebaker	White	Willis Jeep	Willis Truck	All Others	Total
Alabama	Oct.	1,110	5	113	596	248	116	15	4	15	23	4	8	4	2,261
10 Mos.		6,365	22	970	5,071	1,585	1,307	173	23	88	162	49	72	26	15,913
Arizona	Oct.	315	1	46	171	80	39	5	7	11	6	7	23	13	704
10 Mos.		2,373	7	569	1,802	705	482	33	14	117	34	93	206	58	6,493
Arkansas	Oct.	901	4	131	650	286	197	6		21	9	3	5	1	2,214
10 Mos.		5,115	26	794	5,027	1,493	1,234	44	8	190	69	82	35	3	14,090
California	Oct.	2,988	36	608	2,305	851	571	35	37	77	81	125	178	214	8,110
10 Mos.	4	24,697	277	6,195	23,079	7,301	5,030	332	222	981	810	1,172	1,740	1,577	73,417
Colorado	Oct.	363	8	68	275	115	106	9	3	16	9	52	52	11	1,087
10 Mos.		3,517	24	775	3,042	998	1,038	89	42	149	104	439	606	142	10,967
Connecticut	Oct.	294	16	59	246	102	156	31	10	8	34	16	19	13	1,009
10 Mos.	18	2,168	78	544	1,854	571	926	216	48	86	250	106	163	108	7,136
Delaware	Oct.	107		12	78	39	40	6			36	3	4	2	327
10 Mos.	6	761	3	193	606	273	387	249	4	13	226	19	16	11	2,787
District of Columbia	Oct.	138	3	29	83	42	25	4	1		6	2	3	3	330
10 Mos.	2	689	11	166	585	282	201	10	28	4	29	15	20	23	2,065
Florida	Oct.	1,038	12	150	697	263	233	36	13	27	52	43	66	25	2,656
10 Mos.		7,593	53	1,344	7,420	1,994	1,779	394	107	304	494	341	569	204	22,596
Georgia	Oct.	881	1	102	552	209	132	23	5	25	33	8	3	2	1,976
10 Mos.		8,433	31	1,580	8,101	1,990	1,950	260	40	255	301	95	83	18	23,137
Idaho	Oct.	220	1	50	104	68	64	5		16	4	13	29	4	576
10 Mos.		1,737	12	468	1,409	684	736	39	4	143	37	154	347	30	5,800
Illinois	Oct.	1,158	54	170	877	282	386	26	11	30	17	24	21	23	3,081
10 Mos.		10,612	373	2,526	10,014	2,337	5,052	221	123	379	462	286	294	264	32,983
Indiana	Oct.	1,101	8	161	663	227	344	21	15	62	77	16	20	111	2,826
10 Mos.		8,317	92	1,574	7,240	1,745	3,528	141	98	584	547	115	178	269	24,428
Iowa	Oct.	390	18	68	344	98	227	3	1	7	13	5	5	8	1,187
10 Mos.	2	4,603	105	932	4,741	829	2,604	57	16	129	108	51	83	67	14,347
Kansas	Oct.	647	7	53	477	148	131		4	13	10	19	14	3	1,526
10 Mos.		5,370	29	624	4,710	1,177	1,608	3	37	162	94	72	137	43	12,075
Kentucky	Oct.	463	5	119	334	153	129	7	1	10	15	15	16		1,267
10 Mos.		4,835	25	795	4,073	1,347	1,240	86	21	140	110	144	137	26	12,981
Louisiana	Oct.	801	3	177	555	196	147	11	1	13	10	17	12	5	1,948
10 Mos.		6,805	32	1,064	6,574	1,483	1,569	70	10	217	143	126	77	18	18,188
Maine	Oct.	175		37	103	52	55	5	1	7	5	21	27	5	494
10 Mos.	3	1,698	12	326	1,388	524	588	129	3	99	57	120	190	47	5,194
Maryland	Oct.	311	4	112	255	61	105	24	5	8	31	13	13	6	948
10 Mos.	23	3,043	41	879	2,976	496	1,135	170	50	103	188	61	99	63	9,327
Massachusetts	Oct.	390	8	107	393	130	135	23	30	9	39	20	37	18	1,347
10 Mos.	39	3,217	84	846	3,924	808	1,432	268	100	96	300	139	303	227	11,783
Michigan	Oct.	1,245	11	263	1,167	334	213	34	33	20	31	52	53	30	3,486
10 Mos.		11,527	160	2,741	12,118	2,847	2,064	210	191	257	274	279	363	283	33,314
Minnesota	Oct.	340	8	57	242	75	121	9	1	10	13	7	13	6	902
10 Mos.		4,740	68	947	4,927	1,176	2,091	97	35	211	89	85	197	99	14,782
Mississippi	Oct.	839		75	552	206	149	12		5	30	45	62	1	1,850
10 Mos.		5,749	2	700	4,926	1,405	1,353	59	1	154	30	45	62	6	14,492
Missouri	Oct.	1,081	14	101	697	249	223	12	18	23	17	13	15	18	2,481
10 Mos.		8,338	120	1,233	6,944	1,954	2,435	67	54	167	237	100	117	78	21,844
Montana	Oct.	294		41	156	83	84	12	1	18	12	23	68	3	795
10 Mos.		2,119	3	455	1,842	746	874	57	18	160	62	181	472	54	7,043
Nebraska	Oct.	277	14	44	227	89	114	1		6	15	8	13	9	817
10 Mos.		2,990	121	593	3,131	795	1,617	39	22	104	110	84	162	191	9,958
Nevada	Oct.	57	1	25	37	20	11	4		5	1	16	18		195
10 Mos.		521	1	197	537	246	241	6	2	105	2	73	131	7	2,069
New Hampshire	Oct.	100		23	62	30	24	9		2	1	10	14	1	279
10 Mos.	6	793	8	216	735	220	244	79	17	47	25	79	144	27	2,640
New Jersey	Oct.	638	7	140	506	182	185	73	5	13	64	11	32	35	1,946
10 Mos.	157	5,458	121	1,726	5,581	1,875	1,894	494	50	153	589	117	241	327	16,763
New Mexico	Oct.	338	1	55	182	109	44	8	1	14	2	14	24	6	796
10 Mos.		2,467	17	438	1,759	686	514	86	6	84	31	123	175	26	6,412
New York	Oct.	1,302	19	470	1,158	444	453	139	52	21	121	70	93	88	4,476
10 Mos.	48	11,023	263	4,148	10,582	3,355	6,055	1,125	466	355	1,138	582	931	688	41,102
North Carolina	Oct.	1,047	1	132	650	238	171	70	2	31	24	22	24	5	2,417
10 Mos.		8,182	36	1,245	6,867	1,747	1,521	346	21	292	305	155	132	50	20,899
North Dakota	Oct.	140		31	139	43	78	1		4	2	7	17	3	465
10 Mos.		1,305	2	311	1,271	410	919	1		53	6	33	63	6	4,390
Ohio	Oct.	1,160	21	237	873	345	426	56	23	3	96	55	45	42	3,414
10 Mos.	6	11,094	178	2,619	11,123	2,576	4,770	482	152	339	805	351	399	433	35,327
Oklahoma	Oct.	799	4	85	599	158	177	3	3	12	10	10	4	1	1,885
10 Mos.		6,052	18	844	5,301	1,357	1,812	48	18	164	125	69	99	37	15,934
Oregon	Oct.	653	10	122	428	223	188	21	8	31	23	40	147	31	1,925
10 Mos.		3,942	82	898	3,577	1,409	1,418	160	42	272	362	275	648	269	13,554
Pennsylvania	Oct.	1,216	30	358	926	390	446	140	13	41	106	12	121	25	3,846
10 Mos.	24	10,861	168	3,323	10,585	2,718	5,482	932	197	461	866	72	847	266	37,043
Rhode Island	Oct.	69	3	15	66	25	29	16	3	2	6	1	3	5	243
10 Mos.	2	719	40	170	726	142	348	90	19	27	60	17	37	33	2,430
South Carolina	Oct.	173		18	113	47	36	8		3	2	2	2		402
10 Mos.		3,826	7	623	2,628	645	576	78	1	67	87	24	29	7	8,298
South Dakota	Oct.	126	2	29	124	30	59			8	2	14	15		4,393
10 Mos.		1,162	20	278	1,347	365	922	2	4	55	16	89	131	2	1,924
Tennessee	Oct.	740	4	96	530	195	196	34	1	7	93	12	12	4	1,874
10 Mos.		5,527	26	1,052	5,232	1,474	1,631	248	35	147	302	91	90	19	15,874
Texas	Oct.	4,758	12	480	2,826	780	730	59	2	65	147	75	50	24	9,968
10 Mos.		27,258	115	3,270	22,302	4,443	6,252	409	43	631	1,052	465	428	141	66,809
Utah	Oct.	188	2	25	76	58	42	3	3	2	3	19	23	2	446
10 Mos.		1,298	10	384	1,157	463	439	29	12	59	48	113	236	51	4,299
Vermont	Oct.	78	1	21	67	33	38	1		2	1	17	23		273
10 Mos.	1	701	8	183	593	251	346	11	7	30	5	147	205	14	2,507
Virginia	Oct.	673	1	103	403	129	128	31	15	19	77	23	29	4	1,835
10 Mos.	6	5,680	20	1,234	5,325	1,299	1,461	381	79	229	298	201	299	77	16,548
Washington	Oct.	435	7	105	378	146	159	7	5	18	88	31	63	32	1,454
10 Mos.		3,691	52	1,182	3,727	1,657	1,628	141	45	181	229	249	490	190	13,482
West Virginia	Oct.	292	1	70	192	115	77	9	2	13	13	35	43	2	864
10 Mos.		2,652	16	777	2,442	811	711	96	13	139	98	256	303	14	8,328
Wisconsin	Oct.	416	7	58	455	139	190	8	2	5	16	14	13	12	1,335
10 Mos.		4,166	32	670	4,351	1,102	2,335	68	22	135	139	130	175	175	13,700
Wyoming	Oct.	165	1	29	94	45	56	1		3	3	13	33		

es*

Total

2,261
15,913
704
6,483
2,214
14,090
8,110
73,417
1,087
10,967
1,000
7,136
327
2,787
339
2,065
2,655
22,596
1,976
23,137
578
5,800
3,081
32,963
2,826
24,428
1,187
14,347
1,526
14,075
1,267
12,981
1,948
18,188
494
5,184
949
9,327
1,347
11,783
3,486
33,314
902
14,762
1,850
14,482
2,481
21,844
795
7,043
817
9,959
195
2,069
279
2,640
1,946
18,763
796
6,412
4,478
41,102
2,417
20,899
485
4,390
3,414
35,327
1,865
15,934
1,925
13,554
3,846
37,043
243
2,430
402
8,296
409
4,393
1,824
15,974
9,988
66,809
446
4,299
273
2,507
1,635
16,548
1,454
13,462
864
8,328
1,335
13,700
443
3,866



USE

SHULER
AXLES



THERE ARE NO BETTER AXLES, AT ANY PRICE!

Since 1915, Manufacturers of: *One-Piece* Tubular and Square Commercial Trailer Axles, Heavy-Duty Front Axles for Trucks, Busses, and Off-Highway Equipment, Low-Bed Machinery Trailer Axles, Heavy-Duty Vacuum and Air Brakes, Miscellaneous Forgings.

SHULER AXLE COMPANY, Incorporated, LOUISVILLE, KENTUCKY

SUBSIDIARY OF FULLER MANUFACTURING COMPANY

SALES OFFICES in DETROIT, CHICAGO, OAKLAND and TULSA

WEST COAST WAREHOUSE
Oakland, California

SOUTHWEST WAREHOUSE
Fort Worth, Texas

, 1956

787,728
688,083

Fleetman's Library

Continued from Page 88

12-volt electrical system servicing is the subject of this new manual just announced by Allen Electric & Equipment Co. For further information, write Allen at 2101 North Pitcher St., Kalamazoo, Mich.

Abrasive discs and cylinder wheels made by Gardner Machine Co. are illustrated together with a listing of

the specifications of the company's complete line in this new catalog. Circle L 8 on the postcard for your free copy.

Air compressors from 1/4 through 20 hp are the subject of this new catalog. It includes a guide to proper selection of equipment to fit the job. Published by Brunner Mfg. Co., you can get a free copy by circling L 9 on the postcard on page 84.

Six-wheel trucks for the construction industry made by White Truck Co. are described in this new folder.

It is well illustrated with several examples of different applications. Circle L 10 on the postcard for your free copy.

Dump bodies, hoists, lift gates, spreaders and van bodies made by Hercules Steel Products Co. are illustrated in this new 4-page, illustrated catalog. Circle L 11 on the postcard on page 84 for your free copy.

Clutch sets and parts available from Accurate Parts Mfg. Co. are covered in this new 40-page catalog. For your free copy, circle L 12 on the postcard.

Hydraulic jacks, pumps, cylinders, rams as made by Star Jack Co., are described in the company's new catalog. There is an interesting section on special units designed and built by the company. Circle L 13 on the postcard on page 84 for your free copy.

Alternator systems designed for small truck fleets—dairies, bakeries, laundries, dry cleaners, etc.—as well as over-the-road fleets are described in this new brochure published by Leece-Neville Co. Circle L 14 on the postcard on page 84 for your free copy.

Boring bar for boring out bus and truck linkage holes as well as king pin holes in front steering spider is described in this new catalog available from Lucker Mfg. Co. Circle L 15 on the postcard for your free copy.

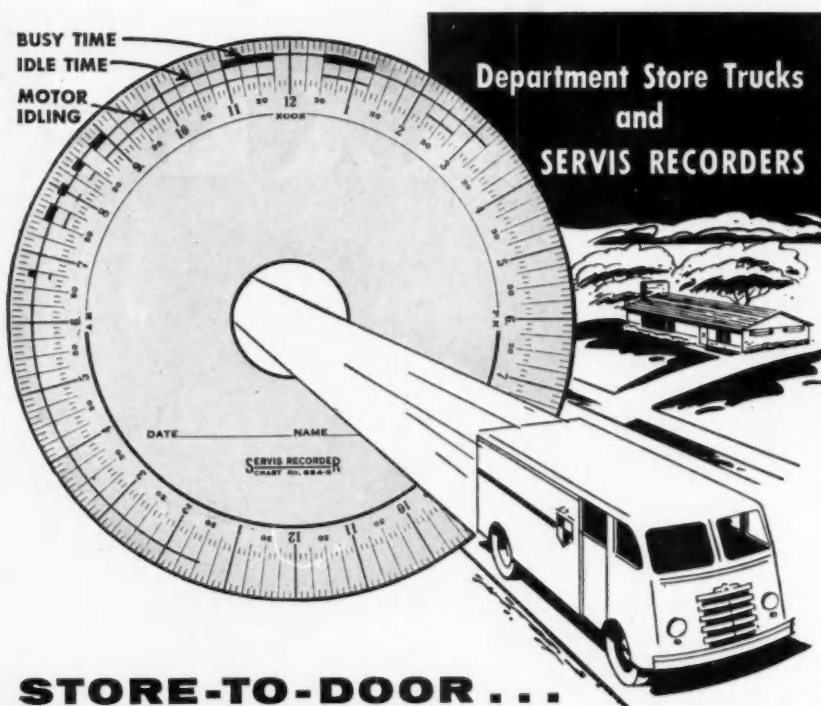
Automatic dockboard that uses the backing truck as a power source for high or low adjustment is described in this new bulletin from Kelley Co. Circle L 16 on the postcard for your free copy.

Canadian trucking rules detailed by provinces as they apply to United States vehicles operating in Canada are given in this new publication. Ask for Canadian Trucking Rules, No. 55-17, Utilities Abroad, Part 4, Bureau of Foreign Commerce. It is available at 20¢ a copy from Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C., or from Dept. of Commerce field offices.

ICC uniform system of accounts for Class 1 passenger carriers revised up to July 1, 1955, is available from Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C. Price is 30¢. Ask for Catalog No. T22.17/3:196.

END

Please Resume Reading Page 90



STORE-TO-DOOR... EFFICIENTLY

If your delivery costs are too high because some of your trucks are Backtracking... Idle Too Long... Not Doing Their Share... Covering Too Large An Area, Servis Recorders will help you make the necessary corrections. Servis Recorders are your assurance of maintaining pinpoint scheduling, your guarantee of efficient store-to-door deliveries.

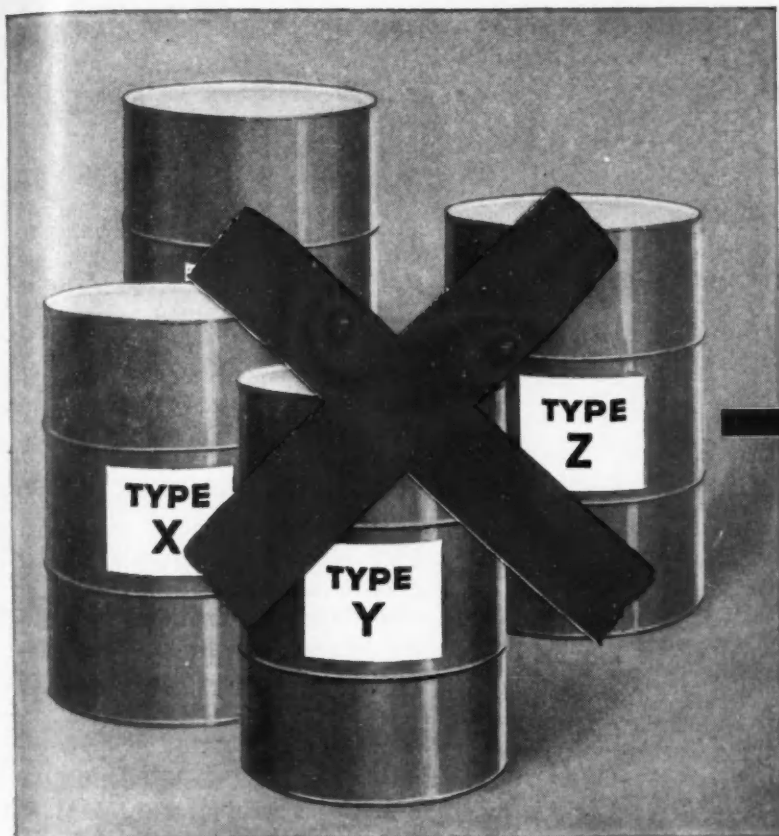
One type Servis Recorder, the Model DS, is designed to keep fuel and maintenance costs at a minimum by recording the exact periods your trucks are at a standstill with the motor running.

Thousands of Servis Recorders are used daily by many of the nation's largest department stores and parcel delivery systems.

Write today for free booklet—
"Ten Ways of Getting More Work Out of Motor Trucks."
THE SERVICE
RECORDER CO.,
1375 F Euclid
Avenue, Cleveland 15, Ohio.



The Servis Recorder
Tells Every Move Your Truck Makes



NOW—ONE GREASE TO LUBRICATE YOUR ENTIRE FLEET

New Multi-Purpose TROJAN H Grease!

Out with the old, in with the new! Let Cities Service Trojan H Grease, the remarkable new lithium base lubricant, take on the job of your many present greases and do a better job than any special grease.

Used for chassis, wheel bearings, and water pump, this one unmistakable "red" grease is ideal for everything from the smallest automobile or service truck to the largest cross-country trucks and buses.

New Trojan H not only has greater stability than previous greases, it also pumps easier even at low temperatures, flows easier, and has exceptional resistance to water, oxidation, and rust. Best of all, it lasts longer and tests show it takes *less* to do this superior job of lubrication. Result: You save time, confusion, and money!

For more information about this unusual multi-purpose grease, talk with your Cities Service representative. Or write: Cities Service Oil Company, Sixty Wall Tower, New York 5, N. Y.

USE JUST ONE GREASE and get all these benefits

- Simplified inventory
- No possibility of error in application
- Less grease consumption
- Easier dispensing
- Less lubrication time
- Better grease stability

CITIES SERVICE

QUALITY PETROLEUM PRODUCTS

Multi-Purpose Greases Slick Up Service

Continued from Page 75

augmented by the addition of conventional corrosion inhibitors.

To obtain the best possible results with lithium-soap, multi-purpose greases, several points are worth noting: (1) excessive dispensing pressure should be avoided

since it wastes grease; (2) bearings should be thoroughly cleaned of previously used grease of other types or brands before applying the lithium grease; (3) overpacking of wheel bearings should be avoided; (4) lubrication schedules should be

revised to take advantage of the properties of the grease; and (5) cleanliness should be observed at all times.

Application

Excessive pressure in the greasing equipment can cause drippage, waste grease, and lead to over lubrication. One manufacturer recommends that a nozzle pressure of 4000 lb per square inch is the maximum ever necessary, and suggests that very often a much lower pressure can be used.

Proper cleaning of other types of grease from bearings and other parts is important, since mixing of greases can result in significant softening of the final mixture, leading to excessive leakage and possible bearing failure.

Anti-Friction Bearings

Anti-friction bearings lubricated by periodic packing, when serviced with a lithium base grease should be disassembled and the components and housings completely cleaned of the old grease. This does not apply, however, to the large variety of anti-friction bearings (generally in no-wheel bearing service), which are supplied with grease through gun fittings at fairly frequent intervals as part of a regular chassis lubrication schedule.

In servicing wheel bearings, care should be taken to see that they are properly packed. Overpacking is particularly to be avoided. The bearings themselves should be inspected after cleaning, and if found fit for further use they should be thoroughly filled with grease by hand or, preferably, with the aid of a grease packer. Hub cavities should then be completely coated with a *thin* layer of grease. Excessive grease in the hub cavity permits the lubricant to slump and promotes the churning of grease by and through the bearing. As a result: the bearing runs hot, the grease expands and leaks out, the grease structure breaks down due to excessive churning and shearing and the grease becomes thin. Usually aeration also occurs, further expanding and thinning the grease.

END

Please Resume Reading Page 76



STOP WASTING GASOLINE!

USE A
HANDY
GOVERNOR

KS

KING-SEELEY CORPORATION
ANN ARBOR, MICHIGAN



MORE RECAPS. "We've already gotten 2 recaps from our nylon cords and expect more," reports Mr. Aikins.



MORE MILEAGE. "Our records show nylon cord tires give over 200,000 miles of service, rolling 24 hours a day, 7 days a week, under loads averaging 24,000 lbs."



FEWER ROAD DELAYS. "Since switching to nylon cord tires, we haven't had one single road delay caused by tire trouble," reports Mr. Aikins.



BETTER THINGS FOR BETTER LIVING
... THROUGH CHEMISTRY



"205,000 MILES OF SERVICE"—145,000 miles on original tread, plus 2 recaps averaging 30,000 miles each—that's what we expect from our nylon cord tires. Nylon cords give *twice* the mileage we got from ordinary tires, cut our costs per mile 46%," reports Delbert Aikins (right), owner of Aikins Motor Express, Osgood, Indiana.

Prominent midwest trucker finds:

NYLON CORD TRUCK TIRES GIVE 46% LOWER COST PER MILE

FROM TRUCKER AFTER TRUCKER comes the same report: actual on-the-road experience *proves* nylon cord truck tires give lowest cost per mile. These truckers have learned that nylon cord tires give more original mileage, more cost-cutting retreads . . . stand up longer.

HERE'S WHY nylon cord tires perform so well. Nylon—strongest of all fibers—gives tires extra strength to withstand every major cause of tire failure. Nylon cords practically eliminate bruise breaks . . . stand up to the twisting and flexing

that take place every time a tire turns. And nylon not only takes the hottest temperatures encountered in normal highway operations, it actually runs 10° to 15° cooler. What's more, damp rot of cord is a thing of the past with nylon cord tires.

ASK YOUR DEALER about nylon cord truck tires today. Du Pont makes the nylon yarns used by rubber companies to make the tires that give extra protection against tire failure. Du Pont does not make tires.

NOW...IN PASSENGER-CAR TIRES, TOO...THE EXTRA STRENGTH OF NYLON



Developed to stand up to the high-speed landings of heavy bombers . . .



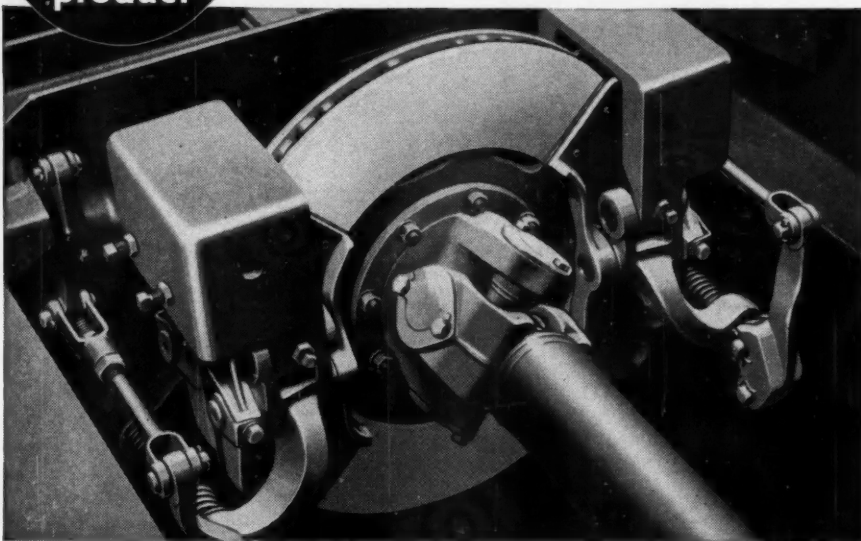
Proved in billions of miles of truck-tire use . . .



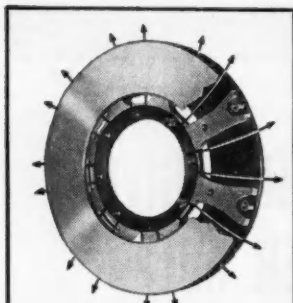
Now available in leading passenger-car tires!



It Pays to Specify TRU-STOP Brakes



**because they give you
Real Emergency Braking...Smooth,
Positive Stops...Safe Parking...
and Lower Service Costs**



Longer Lining Life

• The terrific heat generated in braking cuts lining life. TRU-STOPS quickly dissipate this heat. Most of the disc is exposed to the air even during braking. And a cooling jet of air circulates through the disc, prolongs lining life.

Real Emergency Braking. TRU-STOPS are real emergency brakes—not just “parking brakes.” They serve as auxiliary brakes on long down-grades and can bring the vehicle to a smooth, quick stop if service brakes suddenly fail.

In fact, TRU-STOPS can do this and more. They can handle the vehicle with safety so it can be removed from the road.

Smooth, Positive Stops. Pressure is in direct proportion to the pull on the brake lever. There is no dangerous self-energizing or “over-braking.”

Safe Parking. TRU-STOPS hold on grades—prevent “parking brake” accidents.

Lower Service Requirements. TRU-STOPS are mounted directly on the drive shaft. Their simplicity of design and accessibility reduce maintenance requirements. Relining or adjustment is a simple job for any mechanic with ordinary tools. It is not necessary to drop drive shaft.

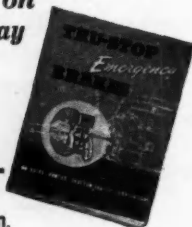
Specify TRU-STOPS for factory installation on your next vehicle.

*This Booklet gives the complete story on
TRU-STOP Brakes. Send for your copy today*



**Automotive and Aircraft Division
AMERICAN CHAIN & CABLE**

601 Stephenson Bldg., Detroit 2
2216 South Garfield Ave., Los Angeles 22 • Bridgeport 2, Conn.



Rubber-Tired Pipe Lines

Continued from Page 69

finest products, and 2.24 per cent of the crude oil.

World War II Impetus

Much of the increase in truck use can be traced to the World War II regulation banning the use of railway tank cars for hauls of less than 200 miles. In 1941, for example, it was estimated that there were only about 4000 over-the-road tank trucks operating in the nation. By 1943 the fleet totaled almost 15,000 and it increased to 18,417 by 1945. By 1951 there were an estimated 25,443 private and for-hire tank trucks in operation.

In the for-hire field, tank truck operators (including those hauling petroleum and other commodities) are second only to the carriers of general commodities on a tonnage basis, and handled about 23 per cent of all tonnage hauled by Class I intercity motor carriers in 1953. In general, for-hire carriers transporting gasoline restrict their operation to within a radius of about 200 miles. In the West, however, some hauls are as long as 600 miles one-way. Average length of hauls for tank truck movement of chemicals tends to be longer than for movement of petroleum products.

END

Please Resume Reading Page 70

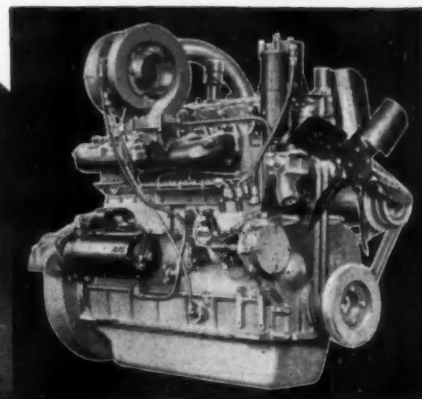


“You should be in burlesque with as much stripping as you do!”

WAUKESHA *Diesels*

**for fast, heavy
hauls...**

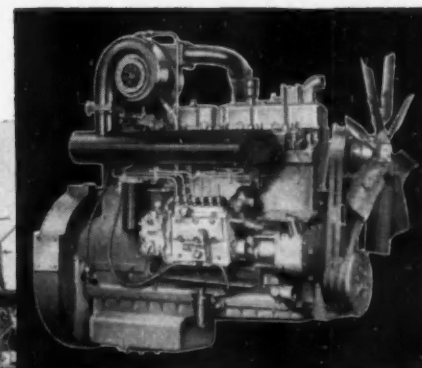
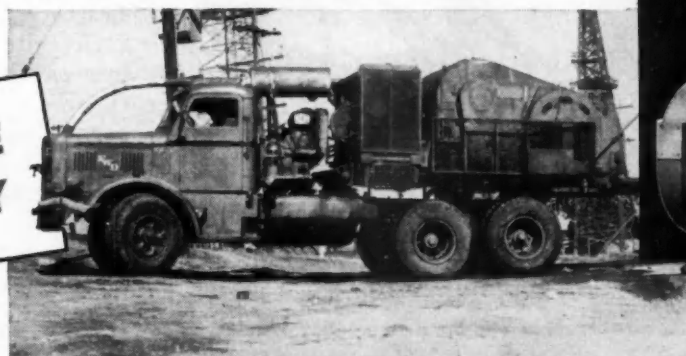
**CROSS
COUNTRY**



135-DKB Series DIESELS
Turbocharged (shown) or Normal
426 cu. in.; 100 to 187 hp.

... where the pay-off is on payload—you'll make more miles and cut costs, too, with these modern feature-packed truckers' engines—Waukesha 135 Series Diesels.

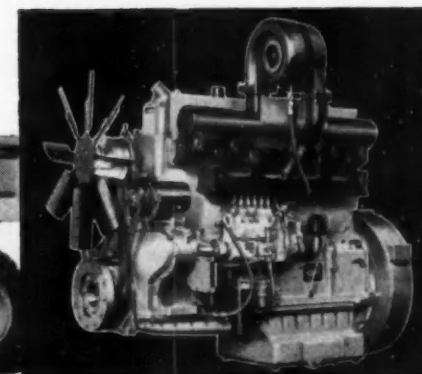
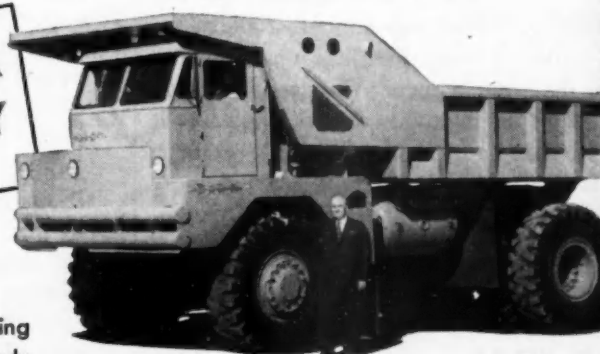
**OFF THE
HIGHWAY**



148-DKB Series DIESELS
Turbocharged (shown) or Normal
779 cu. in.; 170 to 280 hp.

... in and out... down and up... over and through
... go the trucks with Waukeshas—148 Series Diesels
putting out the power that pulls and pays.

**EXTRA
HEAVY-DUTY**



... those tremendous, crushing
30-ton, 35-ton, 40-ton loads

... up stiff grades, without faltering or breakdown
... day after day—with Waukesha WAKDB Series Diesels.

WAKDB Series DIESELS
Turbocharged (shown) or Normal
1197 cu. in.; 240 to 350 hp.

Send for Bulletins

262 R

WAUKESHA MOTOR COMPANY, WAUKESHA, WIS.

New York

Tulsa

Los Angeles

COMMERCIAL CAR JOURNAL, January, 1956

107

Automation for Shop Records

Continued from Page 83

ment inventory at a minimum and with a minimum of clerical effort.

A mechanized visible filing system was used. Visible record slides are housed in an upright cabinet, which also supports a desk-like ledge at which the oper-

ator works. As the clerk pushes a button on the control panel, the desired slide is delivered automatically to the work desk in a matter of seconds—completely eliminating the need for the searching of files.

**FAST ★ CLEAN
ECONOMICAL**



Outfit (illustrated) comes complete with hose, precision handle, "Y" connection, and interchangeable stems ready for use with standard welding cylinder.

With the four different sized stems and soldering iron in this outfit you can handle any job from the heaviest body soldering down to the smallest spot repairs. Use it as an auxiliary to your standard oxy-acetylene welding and cutting outfit. Just attach the "Y" connection to the outlet of your acetylene regulator and operate both outfits from the same cylinder. The precision torch has a convenient shutoff valve and pilot flame control built into it for economical operation. Ask your local LINDE jobber for a demonstration or write for more details to LINDE AIR PRODUCTS COMPANY, a Division of Union Carbide and Carbon Corporation, 30 E. 42nd St., New York 17, N. Y. In Canada: Linde Air Products Company, Division of Union Carbide Canada Limited, Toronto.

GET IT FROM YOUR

LINDE JOBBER

The terms "Prest-O-Lite" and "Linde" are registered trade-marks of Union Carbide and Carbon Corporation

Automation Advantages

Just a glance at these purchase and inventory record card enables the storekeeper to:

1. Accurately spot-check the physical inventory against the control records. This practice of spot-checking inventory periodically as items come up for review has eliminated the need for the time-consuming physical inventory count every month.

2. Get an accurate idea of the usage of the part in order to judge reorder quantity or readjustments of inventory amounts.

3. Complete all paper work connected with requisitioning a purchase in a matter of seconds. This visible card form actually serves as a "traveling" requisition. Instead of filling out a separate requisition sheet, as was formerly required, the storekeeper now makes only two simple entries—the date and the quantity he wishes ordered. From the storekeeper the purchase control card form goes to the purchasing agent. The form is valuable to the buyer as a full record of all purchase prices, discounts and shipping lag experience on past orders of the part. These data, together with current facts which the buyer can gather quickly, give all the information he needs to decide where to place the order. In order to launch an order the buyer has only to write the vendor number alongside the information which the storekeeper has entered and attach the purchase order for typing. This paperwork simplification makes it possible for a buyer to perform his job in literally a fraction of the time which was formerly required.

This user says the mechanization of its inventory control record keeping has made possible savings which have completely offset the cost of the equipment in just a few months. Despite an increase of more than 25 per cent in rate of issue and receipt in the storeroom, over-all purchasing and stock record keeping clerical costs were decreased about one-third.

END

Please Resume Reading Page 84

KEEP

KEEP CAMPBELL "66" EXPRESS ROLLING ON SCHEDULE

Daily telephone contact with major terminals enables vast motor freight fleet to move with amazing efficiency

Regular contact with its major terminals in nine states, by telephone, helps Campbell "66" Express, Inc., Springfield, Mo., serve its customers with great speed and efficiency while maintaining a notable safety record.

The company moves some 800 million pounds of freight more than 16 million miles each year. The telephone is used for daily calls to major terminals. "For one thing," officials explain, "we want the outlying stations to feel that they belong to the Campbell family."

In addition to immediate transactions, these calls provide specific reports. They cover such items as: Number of Overs, Number of All Short, Forced Billings, Pickups, Delivery Cost, Cost per Bill, Average Inbound per Trailer, Layover Time, Number of Trailers Not Loaded, Arrival of Road Schedule.

To arrange for pickups, Campbell "66" also encourages collect calls from customers, as well as from commission agents in small cities throughout its area.

BELL SYSTEM PRIVATE LINE SERVICES ALSO SERVE CAMPBELL "66" EXPRESS

Private line teletypewriter service is used for many purposes, including line-ups and arrivals . . . OS&D reports . . . foreign trailer reports . . . interchange trailer reports . . . tracing shipments . . . message service.

Private line telephone circuits are used for dispatching . . . management discussions . . . claim

adjustments . . . discussion problems on vehicle conditions and OS&D reports.

These are just a few of the ways in which Bell System services help speed up and improve the far-flung operations of Campbell "66" Express. Call your Bell Telephone business office and a communications engineer will study your oral and written communication needs. His survey is yours without cost or obligation.

BELL TELEPHONE SYSTEM

TELEPHONE

TELETYPEWRITER

MOBILE RADIO



Back to School at New York Omnibus

Continued from Page 71

lected from maintenance supervision depending on their individual qualification to handle that particular subject. Factory service men sit in on each meeting, though they are not used as instructors. They are encouraged, however, to take part in the dis-

cussion and in this way lend an important hand in the dissemination of information.

After each session is completed, detailed and accurate minutes are prepared and distributed to all supervisory personnel, thereby providing a handy reference to fac-

tual data and procedure so that efficient maintenance practices can be carried out on a company wide basis.

Subjects Covered

The subject matter of the maintenance studies which were held in the past are as follows:

- 1.—Engine Air Intake System
V-Drive Transmission
Brake Reline Procedure
- 2.—Spicer Transmission
- 3.—Vehicle Lubrication
Electrical System
- 4.—Paper Work
- 5.—Engine—Part I
 - a) General Operation
 - b) Life Record
 - c) Cooling System
 - d) Lubricating System
- 6.—Engine—Part II
 - a) Injection System
 - b) Exhaust Mechanism
 - c) Governor Operation
 - d) Engine Timing
 - e) Trouble Shooting
- 7.—Air System
- 8.—Inspection System

Last October, the Ninth Maintenance Study was held, and the GM V-drive transmission was again selected as the subject for discussion. An examination of the general procedure and photographs taken at this meeting shows the methods employed in covering the details of a particular subject.

Parts Mileage Up

A review of the cost and life record since the first V-drive meeting showed a substantial reduction, approximately 40 per cent, in the number of units coming into the shop for repair. This was accomplished in large part as a result of a procedure of analysis, whereby, the source of trouble could be readily pin-pointed before removing a transmission. A graph illustrating these cost and performance figures was given to all present.

The results of a survey of the "reasons for removal" of V-drives for the past year were given. These "reasons" were thoroughly discussed, stating what was being done by the company and the man-

(TURN TO PAGE 116, PLEASE)



TUNG-SOL® UNIVERSAL SIGNAL FLASHERS

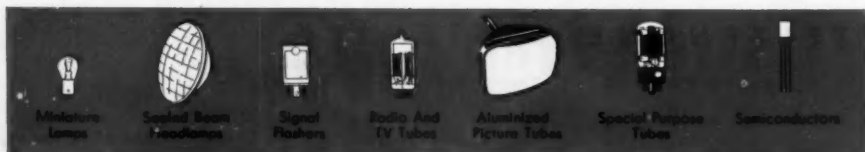
Just about nine out of every ten service jobs that necessitate replacement of the signal flasher can be handled with this one Tung-Sol Universal Flasher. The special mounting bracket takes the place of ten screw-terminal and attached-bracket types of mounts—seven in passenger cars and trucks with 6 volt circuits and three in 12 volt trucks and busses. In addition, both the 6 and the 12 volt Universal Flasher can be stripped down to replace the respective plug-in types. Universal

For 85% of
all Signal
Flasher
Replacements

Flashers P229D (6 volt) and P241D (12 volt) are supplied with mounting brackets and special wiring connector screws and nuts. Order from your regular supplier.

TUNG-SOL ELECTRIC INC.
Newark 4, N. J.

Sales Offices: Atlanta, Culver City (Los Angeles), Dallas, Denver, Detroit, Melrose Park (Ill.), Montreal (Canada), Newark, Philadelphia, Seattle.



2 1/4¢ PER MILE

on its Fleet of Reo LPG's!



E. Stuart Hilliker

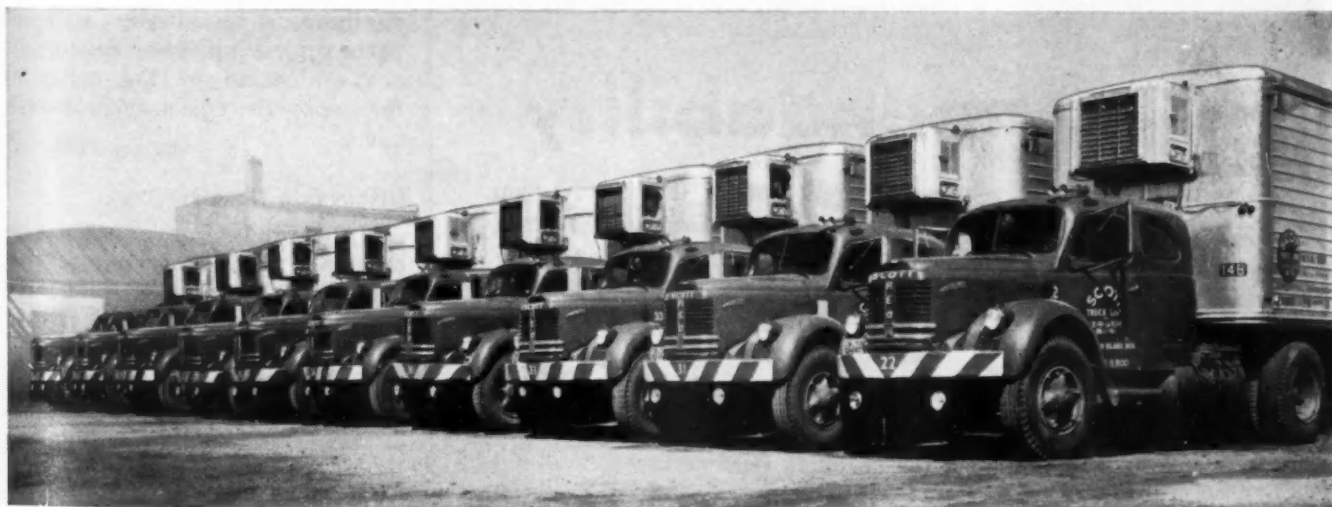
**Reports E. Stuart Hilliker, President,
Scott Truck Lines, Inc., Denver, Colorado:**

"We've reduced our fleet operating costs from 12 cents to 9 3/4 cents per mile with Reo LPG's, a savings of 2 1/4 cents per mile. Proof of our soundness in standardizing on Reo LPG Tractors lies not only in the amazing fuel savings alone, but in the consistent ease and regularity with which we maintain a fast express service between Denver and Chicago without failures and costly down-time—a 2,064 mile round-trip run on a 60 hour schedule. This includes terminal time in Chicago.

"Summer or winter, our Reo LPG's always kick over. We have no fuel pump or the usual gasoline problems.

"Our Reo LPG's burn clean . . . with no exhaust contamination or discoloration of units pulled."

If you, too, are looking for new ways to cut your cost of transportation, look at Reo's complete line of LPG Gold Comet Engines—107 to 220 h.p., sixes and V-8's—with modern *short-stroke, wet-sleeve* design. All are backed by 100,000 mile or 1 year warranty, whether in a rugged Reo Truck Tractor, or as replacement in other truck makes. For all the facts on the amazing performance of Reo LPG's, call your Reo Factory Branch or local Distributor.



The Scott fleet of 19 Reo F-50T LPGs hauls over 7 million lbs. per month between Denver and Chicago. Principal

cargo is prime beef for National Food Stores. Tractor and reefers operate on "Philgas" LPG.

FOR LPG

REO MOTORS, INC.

LANSING 20, MICHIGAN

TORONTO, ONTARIO

SUBSIDIARY OF **BOHN** ALUMINUM AND BRASS CORPORATION

TRUCKS, BUSES AND GOLD COMET ENGINES FOR ORIGINAL EQUIPMENT, INDUSTRIAL AND REPLACEMENT—GAS OR LPG

COMMERCIAL CAR JOURNAL, January, 1956

COMPRESSOR PLUS VALUES



Performance

has established Ingersoll-Rand Type 30 Compressors over the years . . . famous for highest efficiency.

Dependability

is certainly one of the factors you demand most in a compressor—and you can rely on Ingersoll-Rand! Air is *there* when you need it, so your production flow never lags.

Quality

is evident in every I-R Type 30 Compressor—from the 1/2 hp through the 20 hp size with pressures to 250 psi—trouble-free operation—top economy! Get catalog 1500-C for more detailed information.

3-246

Ingersoll-Rand

11 Broadway, New York 4, N.Y.



AIR COMPRESSORS



AIR IMPACT TOOLS



ELECTRIC IMPACT TOOLS



IMPACT CUTTERS



TIRE TOOLS



AIR STARTING MOTORS

Originators of Impacttools

AIR & ELECTRIC

New York Omnibus

Continued from Page 112

ufacturer to offset them. This study indicated that about 15 per cent greater reduction in the number of units removed could be accomplished by further improvement in the method of analyzing reported defects.

Pinpointing Causes

A simplified schematic diagram of the "power train" from the accelerator pedal to the transmission output flange was used to illustrate how with a tachometer, two gages, and a 6-in. scale, the source of trouble could be quickly and accurately isolated. It was pointed out that this system of analysis is used primarily to assist the garage in evaluating their trouble.

Secondly, it enables the shop to know the particular defect which caused the transmission to be removed from the coach before commencing work on the unit. Finally it allows, in combination with the parts replaced by the shop, an exact evaluation of the cause of failure by the engineering department.

Discussion Results

It was brought out in discussion that an increasing number of clutch and transmission failures were brought about by accumulated defects in the transmission fluid system. A complete description of the fluid flow and function of the turbine, lubricating and scavenging systems of the V-drive transmission was given with the aid of a schematic diagram of these systems. Established procedures for the maintenance and inspection of the fluid system were reviewed and their importance emphasized.

A new procedure by which the condition of the scavenge system can be evaluated was explained and demonstrated using one of the company's buses which was brought into the meeting room for that purpose. Such a demonstration makes possible the blending

(TURN TO PAGE 121, PLEASE)

New York

of the the which gre nance can

The im ternal ad and shift proper pr the vehicl transmiss with its c to the air

Summary

A mime tiple choi to each on asked to swers. Th find out w matter co was not t copy of t rect answ the result minutes o

We rea Omnibus Study Pro all mainte

Mack's



Mack's r for heavy orous dutie with large frames, de to end. Ch engines fr able as is a and gear sions from Mack Quad dual reduc rods and to use large- Bogies in t rated at 4 are listed GVW. Spe cludes Mac to increase add to bral

New York Omnibus

Continued from Page 116

of the theoretical and practical by which greater efficiency in maintenance can be attained.

The importance of correct external adjustment of the clutch and shift levers was reviewed. The proper procedure was shown on the vehicle and also on a complete transmission set up on a stand with its clutch cylinder connected to the air system of the coach.

Summary of Results

A mimeographed set of 25 multiple choice questions was given to each one present, and they were asked to check the correct answers. The purpose of this was to find out what part of the subject matter covered by the questions was not thoroughly understood. A copy of these questions, the correct answers and a summary of the results was enclosed in the minutes of the meeting.

We realize at New York City Omnibus that the Maintenance Study Program is not a panacea to all maintenance problems. It is a

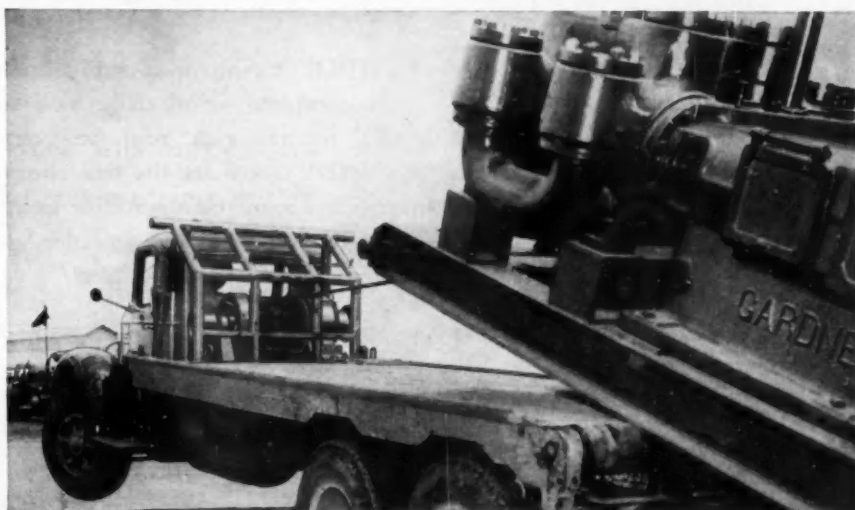
valuable "tool" provided to supervision for use with daily jobs of maintenance. Like all tools it must be properly used to show its value. With each session the design of the "tool" is improved through improved methods of conducting the meeting and illustrating the point. With each session the use of the "tool" is improved through the further realization by supervision in its value to their jobs. Men called into a technical con-

ference of this type realize more fully their function in management and gain a more thorough understanding of company policy. They view their individual problems here with a new perspective and are in a better position to carry out procedures and supply information necessary for the overall improvement of the company equipment.

END

Please Resume Reading Page 72

BRADEN WINCHES



Another Job Made *EASIER* with a BRADEN Winch

Every week we hear of new ways BRADEN owners are putting their BRADEN Truck Winches to work. BRADEN'S ruggedness, safety and dependability, make them economical on any handling job.

BRADEN Winch sizes are available from 3,000 to 100,000 pound capacity models, to fit any make of truck. Be Safe . . . use BRADEN Truck Winches.

BRADEN WINCHES ARE IN SERVICE AROUND THE WORLD

Write for Complete Catalog

BRADEN WINCH COMPANY

P. O. Box 547, Broken Arrow, Oklahoma



Mack's Super-Duty B-80's



Mack's new B-80 line is designed for heavy construction and other rigorous duties. It will include 11 models with large heat-treated alloy steel frames, double-channelled from end to end. Choice of gasoline or diesel engines from 170 to 300 hp is available as is a wide choice of wheelbases and gear ratios, including transmissions from five to the new 20-speed Mack Quadruplex. Four-wheelers have dual reduction rear axle with radius rods and torque rods, while 6-wheelers use large-capacity Mack Balanced Bogies in two sizes. Four-wheelers are rated at 46,000 lb GVW, 6-wheelers are listed at 55,000 and 65,000 lb GVW. Special optional equipment includes Mack's new exhaust brake said to increase retardation by 50 per cent, add to brake lining life.

COMMERCIAL CAR JOURNAL, January, 1956

GMC Tractor Air Suspension

Continued from Page 91

to more air pressure and compensate for the unbalanced character of the load.

With constant tractor frame and trailer floor heights (35½ in. in the tractor and 46½ in. in the trailer of the experimental vehicle), loading docks could be stand-

ardized so lifting forks for loading and unloading trailers would move smoothly between the trailer floor and the loading platform.

More Cargo Capacity

This constant tractor-trailer height also could mean an increase

in trailer cubic-foot capacity, as trailer manufacturers could build trailers to the maximum legal height of 12½ ft without leaving "deflection" space between the full-loaded and empty trailer height.

In the experimental GMC tractor-trailer combination, the trailer has 37 cu ft more cargo space than similar vans with conventional leaf springs, and refinements in future tractor and trailer design could increase the trailer capacity.

Suspension Components

The air suspension system on the experimental tractor-trailer combination is composed basically of air bellows, leveling valves, air beams, air chambers and an air storage tank.

The tractor has a total of six bellows, four in front and two over the rear axle. Two small bellows are mounted on each end of the front axle and a large bellows is installed at each end of the rear axle, giving ample support to the tractor's above-frame structure.

Four large bellows support the trailer. Two are mounted on each side of the trailer between the axle and the trailer's body.

Compressed air is supplied to the bellows, air beams and air chambers from the tractor's air system. It flows from the storage tank to the leveling valves that meter the air into the bellows, and beams and chambers.

Air is available to the suspension system from the supply tank only when pressure is sufficient to maintain a safe margin for the air brake system. The suspension has been designed to prevent loss of brake control in event of failure of any part of the suspension.

As the trailer load increases, the valves send air into the bellows; as the load decreases, they release air from the system. Thus the bellows are properly inflated for varying loads at all times.

Torque rods, a sway bar and lateral stay bars maintain the positions of each axle against lateral, longitudinal and torsional movement. All linkage is mounted in rubber.

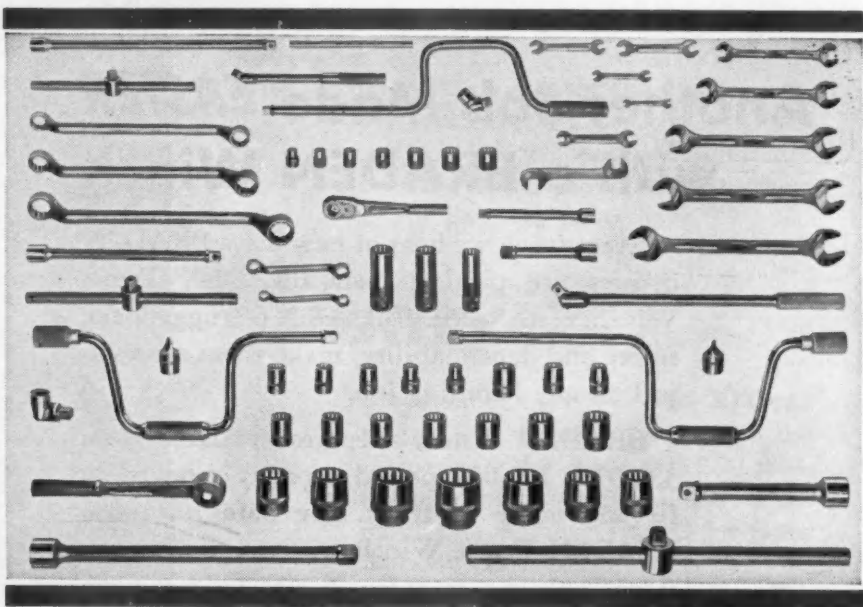
END

Please Resume Reading Page 92

One tool
or a chest—
if it's
BONNEY,
it's best!

WHETHER it's an open-end wrench . . . or a complete set of tools, look to BONNEY for the *right* tool for every job. BONNEY Tools are the first choice of automotive men, because their lightness, strength, balance, and precision always give them just the right "feel."

Good tools—and the right tools—are half the job. So make your job easier. Insist on BONNEY Tools.



Illustrated: Bonney AM 44 Socket and Tool Set—70 pieces.
¾", ½", ¼" Square Drive Sockets and Attachments.

BONNEY FORCE & TOOL WORKS
ALLENTOWN • PENNSYLVANIA



FOR POWER

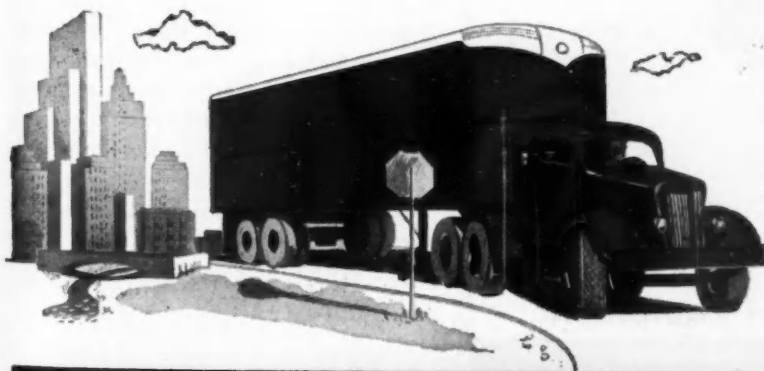
CHROME CONTROL

LEAK-PROOF

REG. U. S. PAT. OFF.

PISTON RINGS

This set will outperform
any other piston ring set in
the "hard-to-hold" jobs regardless
of kind, design or price.



FOR PROFIT

To make a profit you've got to keep your trucks
on the road and out of the repair shop.
That calls for *dependable* McQuay-Norris
parts. They're built to last!

McQUAY-NORRIS MANUFACTURING COMPANY



ST. LOUIS 10, MO.

Agreed Charges—New Menace

Continued from Page 68

reduced rate is necessary to meet competition or regain lost traffic. It will not necessarily have to prove that the rate is compensatory.

The agreement will be subject to renegotiation at specified intervals.

There will be no maximum limit set on the percentage of traffic that the shipper may agree to send by rail.

The shipper will not be limited to a single rail carrier in meeting his required percentage of shipments by rail.

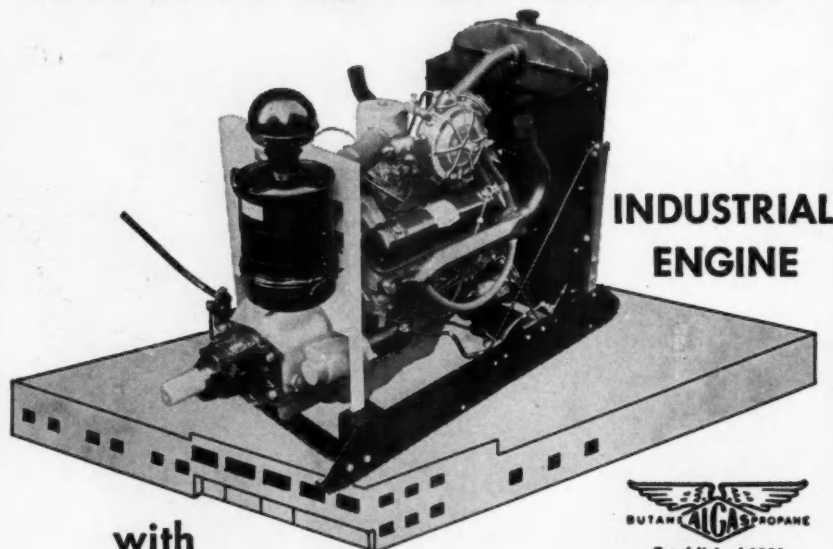
There will be a minimum opportunity for shippers or competing carriers to protest the rates. Or, if protests are permitted, it will be possible to continue the rates in effect pending their outcome.

Don't expect the railroads to start scalp hunting as soon as agreed charges are made legal. Chances are, at first only a few such agreements will be established, and it is likely that the rates will not be too low for some truck operators to meet. These agreements will be the bait to lure other shippers into similar agreed charges, and to enlist shipper and public support for the principle of agreed charges. Basis for the approach to shippers: "Look how agreed charges are helping to reduce transportation costs."

On a long-term basis, railroads will be selective in establishing agreed charges. They'll offer the low rates to shippers or groups of shippers who are now using trucks. Rates will be sufficiently low to be attractive to shippers, and may even be low enough for the shipper to use them in preference to using his own vehicles. Shippers who resist agreed charges may find themselves forced into them by competition. Typical of what could happen is the situation in Canada, concerning shipment of canned goods from Ontario and Quebec to the western provinces.

(TURN TO PAGE 126, PLEASE)

It's A F O O R D

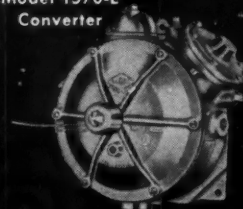


with

ALGAS LP-GAS carburetion equipment



Model 1570-E
Converter



Model 615
Filter



Series F-1850
Carburetor

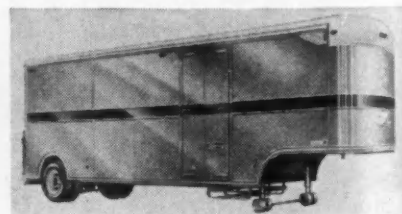


Across the nation and throughout the world, as the name Ford gains wider recognition as a symbol of quality, Ford Industrial Engines are gaining further recognition for engineering advancements that bring increased efficiency and economy. With the increasing use of LP-Gas in many fields, it is only natural that Ford would provide industrial engines that are LP-Gas equipped. In choosing LP-Gas carburetion equipment for their industrial engines, Ford made sure that the quality, performance and economy would measure up to Ford standards. Naturally ALGAS is proud that Ford industrial engines are among the leaders using ALGAS equipment.

AMERICAN LIQUID GAS CORPORATION

1109 Santa Fe Avenue • Los Angeles 21, California

Dorsey's HiCube HHG Van



With inside width of 92 in., Dorsey Trailers, Elba, Ala., claims a 2400 cu ft payload capacity for its new "HiCube" furniture van. The new model weighs 9500 lb. Floor height is 28 in. with 9:00 x 20 tires, with a 42-in. distance between wheel boxes. Standard height is 84 in. ahead of the 24-in. drop, 108 in. behind. Up to 90 in. ahead and 114 in. behind are available as an option. Dent-proof plastic roof cap is standard. Construction is dust proof and all vans are undercoated. Rear doors are full length and curbside door is 48 in. wide.

a oppor-
 competing
 ces. Or,
 it will
 e rates
 come.
 oads to
 soon as
 e legal.
 a few
 estab-
 hat the
 or some
 These
 t to lure
 agreed
 per and
 nciple of
 the ap-
 ook how
 g to re-

railroads
 blishing
 offer the
 roups of
 g trucks.
 ow to be
 nd may
 e shipper
 to using
 who re-
 nd them-
 competi-
 d happen
 concern-
 ods from
 western

(CASE)

Van



a., Dorsey
 2400 cu
 its new
 The new
 height is
 with a 42-
 el boxes.
 ead of the
 Up to 90
 are avail-
 of plastic
 ruction is
 re under-
 length and

uary, 1956



*go places with KESTER
 a must wherever SOLDER is used*

KESTER ACID-CORE SOLDER goes a long way toward making soldering jobs faster, easier, cleaner and more economical. That's why Kester's the automotive trade's overwhelmingly preferred solder choice from coast to coast . . . and for many

more years than can really be remembered!

DON'T FORGET the other Kester products—Radiator Flux-Core Solder . . . Plastic Rosin and "Resin-Five" Core Solder . . . Solid Wire and Bar Solder—also Soldering Salts.

KESTER SOLDER

COMPANY 4205 Wrightwood Avenue, Chicago 39, Illinois; Newark 5, N. J.; Brantford, Canada

COMMERCIAL CAR JOURNAL, January, 1956

Foote Lithium Does It!

Use 1 Lithium Base Grease



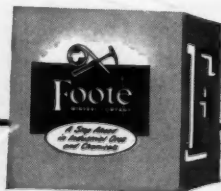
**...for ALL JOBS
at ALL Temperatures**

You will keep your "payloads" rolling at lower cost per mile when you use ONE lithium base, multi-purpose grease from bumper to bumper. Correct lubrication is assured because you use the same grease for wheel bearings, chassis, water pump and universal joints . . . greasing operations are simplified . . . inventory is reduced. All of these advantages and savings can be yours.

Here is the important thing to know—a lithium base, multi-purpose grease is the ONE grease that resists water and lubricates effectively under all conditions at temperatures ranging from -50°F to over 350°F .

It will pay you to contact your grease supplier for lithium base, multi-purpose lubricating grease.

*We will be glad to send you a copy of
"Front Wheel Bearing Lubrication,"
an N.L.G.I. report.*



**LITHIUM HYDROXIDE
FOR INDUSTRY**

FOOTE MINERAL COMPANY

445 Eighteen W. Chelton Bldg., Phila. 44, Pa.

RESEARCH LABORATORIES: Berwyn, Pa.

PLANTS: Exton, Pa.; Kings Mountain, N.C.; Sunbright, Va.

Agreed Charges

Continued from Page 124

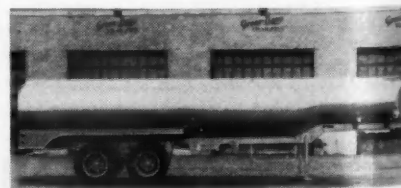
Several years ago, Canadian truckers were obtaining a large volume of canned goods shipments by offering rates of \$2.80 to \$2.90 per 100 pounds, compared with the rail rate of \$3.03. In September, 1953, the railroads offered 10 canneries rates of \$2.76 per 100 pounds between the East and a western city. Rates to other western cities were correspondingly lower. The rate was available to the shippers, provided they agreed to ship at least 85 per cent of their canned goods by rail. Truckers met this rate for the other canners who were not tied to the railway by the agreement. Later, the agreed charges were renegotiated, and the rates lowered by a further 30 per cent. This was too low a rate for the truck operators to meet, and the canners who had formerly relied on trucks were virtually forced into shipping by rail or else be faced with being undercut in the western markets by their competitors.

Possible Effects

In sounding the alarm about agreed charges at the ATA convention, Mr. Knudson estimated the potential effects of agreed charges taking effect in this coun-


(TURN TO PAGE 128, PLEASE)

Great Dane Lightweight Tank



Great Dane Trailers, Savannah, Ga., announces use of high strength aluminum alloys to provide a lightweight tank transport for liquid petroleum products. Great Dane adjustable tandem assembly permits operator to change load distribution at will. An adjustable fifth wheel plate is provided to complement the new sliding suspension. Photograph shows a four-compartment unit with 6750-gal capacity. Built on 10:00 x 20 tires, it tips the scales at 8460 lb.

What do you look for in Brake Blocks?



1. Safe Stops
2. No Fading
3. Long Life
4. Consistent Action

**You'll get
all four with
Thermoid!**

Whether yours is a fleet of over-the-road trucks, high-balling along the expressways . . . or whether it's a bus fleet, with brakes working constantly in congested, stop-and-go traffic . . . it will pay you to specify Thermoid Brake Blocks.

Regardless of operating temperatures or weather conditions, Thermoid Brake Blocks perform evenly and consistently—pass the most rigid stopping tests. Highest quality ingredients, compounded under Thermoid's exclusive Dry Mix Process, assure long life and non-fading action.

Insist on genuine Thermoid Brake Blocks for maximum safety at minimum cost-per-mile!



Thermoid Company • Trenton, New Jersey

the standard of precision processing in brake lining, brake blocks, clutch facings, hydraulic brake parts and fluid

Agreed Charges

Continued from Page 126

try. The major points in his summary:

- The trucking industry as we know it would be destroyed.

- A few of the larger common motor carrier systems might be able to survive and even enter into agreed charge arrangements, with some shippers, but the small and

medium sized carriers would be reduced to local cartage operators, if they could exist at all.

- Most motor carriers would be changed in operating status to contract carriers. There would be a mad scramble for contracts and only the strong would survive.

- The specialty motor carrier that could go where the railroads can't go and haul what they can't haul, would be the only carrier likely to survive.

- The rails, with support such

as might be enlisted from shippers who look to rates only, would obtain about one billion dollars in new net revenues after taxes, which they do not have today. With this tremendous increment to their financial structure, their ability to meet and defeat all kinds of competition would be practically unchallenged and unchallengeable.

- Some water carriers would probably be able to keep part of their bulk traffic by also entering into agreed charges, either in conjunction with the railroads or on their own.

- The air lines would continue to expand passenger-wise, but their freight hauling ambitions would be severely curtailed.

- The shippers would be happy for a while, but would be at the mercy of the railroads once truck competition had been eliminated.

- The National Defense would be crippled through the loss of an efficient trucking industry.

- The Interstate Commerce Commission would become an unnecessary arm of the government. Insofar as Sections 1, 2, 3, 4, 5 and 6 of Title I of the Act and corresponding sections in other titles are concerned, and its remaining functions relating to safety, car service, the granting of operating permits, etc., could then be transferred to the Commerce Dept.

Action Needed

The trucking industry can't afford to let agreed charges become a part of the railroads' rate structure in this country. Potential results have already been spelled out.

To defeat attempts to establish agreed charges, the industry will have to guard against their introduction in forthcoming legislation; will have to convince shippers that agreed charges are not, in the long run, in their best interest; will have to convince legislators that any legislation that is potentially crippling to the motor carrier industry is not in the best interest of the nation.

It's a big job. The importance of succeeding in it cannot be over-emphasized.

END

Please Resume Reading Page 69

Trucks perform best!

On High Octane
LP-Gas with



...and here's why

Perfect fuel mixtures are guaranteed by Century's metering valve regardless of changing conditions, temperatures or altitudes. You get economy and performance because the metering valve controls and proportions the gas exactly as pre-set at the factory to the engine's performance curve. No elaborate adjustments, only a tune up is required—just set it! Seal it! And forget it!

Get the facts, write for Bulletin No. G-75

CENTURY
GAS EQUIPMENT COMPANY
Lynwood, California



Faster Starting!
Perfect Idling! Economy!

A CENTURY FOR
EVERY TRUCK



economical way to get extra electrical power

DELCO-REMY piggy back GENERATORS

Offer "tailored" extra output in single voltage systems . . .
permit use of 6- and 12-volt units on the same vehicle

If you operate taxis, police cars, delivery trucks or any other fleet vehicles needing extra or special electrical power . . . Delco-Remy piggy-back generators are your low-cost solution.

Put a 6-volt generator on top of a 12-volt original equipment generator and you can operate a separate 6-volt system for radios, sirens and other 6-volt electrical units on the same vehicle. If charge-at-idle, more low-speed output, or higher maximum output in a single voltage system is your need, you can "tailor" performance by teaming up two suitable generators from the wide selection available.

Packaged kits, complete with instructions to help you do the conversion job quickly and economically, are now available. See your General Motors car or truck dealer or your United Motors System dealer soon for complete information. Delco-Remy, Division of General Motors, Anderson, Indiana.



GENERAL MOTORS LEADS THE WAY—STARTING WITH

Delco-Remy

ELECTRICAL SYSTEMS

Micro-Siping of Tires

Continued from Page 79

used in the machine is to allow for the deforming of the tire tread into its normal loaded working position by pressing it against a threaded drum which performs the function of feeding and indexing. The siping knife, mounted

in the drum, makes a full cut at each revolution of the drum. The process produces parallel cuts radially, thus eliminating weakness of the wedge-shaped blocks. The cuts can be spaced as closely as desired.

Present recommendations are that passenger car tires be siped 10 to the inch and truck tires five to the inch. Truck tires are usually cut from 7/16 to 9/16-in. deep, depending upon the amount of rubber on the tread. The method employed for indexing in the machine allows for the cutting of any tire a second time. The second cutting will index perfectly with the first.

Simple Machine


The machine is simple, both in design and operation. One simple drum, on which the long rotary slicing knife is mounted, does all of the work. The wheel or rim on which the tire is mounted is secured in the machine with 20 lb of air in the tire, and the assembly is forced down so that the tire tread conforms to the surface of the drum. Under power, the tire is rotated, indexed, siped, lubricated and cooled. It takes approximately six minutes to sipe one 11.00 x 20 tire after it is mounted in the machine. Mounting time is determined by the condition of the tire to be siped. A new tire takes only a few minutes. A tire that has been used must be thoroughly cleaned before cutting, with all stones, pieces of metal, and other foreign matter removed.

A micro switch shuts the machine off automatically when the cycle is completed and the last cut is made. During the process, the drum itself passes through a bath of lubricant which is specifically designed for the work. This provides for protection against rust and corrosion of vital parts, affords lubrication, and is harmless to rubber and free of toxic or explosive vapor. The lubricant is also harmless to human skin.

Micro sipe cuts are always cut radially and are equally efficient in both directions. Two distinct forces take place as the result of micro-siping to create tremendous gripping action. The cross bars of rubber are caused to compress between the road surface and the air pressure within the tire. Under static conditions, these bars act individually to seek a lower


(TURN TO PAGE 134, PLEASE)

BIG OPERATOR OPERATES!



**SPECIFY
MICHIGAN HI THERM**

Made to the same original equipment specifications as the bearings we supply to leading car and truck manufacturers.



Big, middle-sized, and small-scale truck operators can really operate on Michigan Hi Therm Engine Bearings. More earning power with more road time. Easier faster replacement with original equipment quality and accuracy.



DETROIT ALUMINUM & BRASS CORPORATION

DETROIT 11, MICHIGAN

Need More Payload Space?



MULTI-STOP DELIVERYMEN FIND MORE "CARGO CAPACITY" IN THE NEW DIVCO "DIVIDEND SERIES" TRUCKS!

THIS NEW DIVCO 130" wheelbase truck will pay dividends to you through its extra-cargo capacity. Picture this: A body load length of 12 feet with capacity of 470 cubic feet!

Here are more dividends for you. The Divco Model 42 was designed especially for fast, efficient multi-stop delivery, for long-life and low maintenance. The super six engine and 4 speed synchromesh transmission, and other power components, are easily accessible from inside the cab. Divco

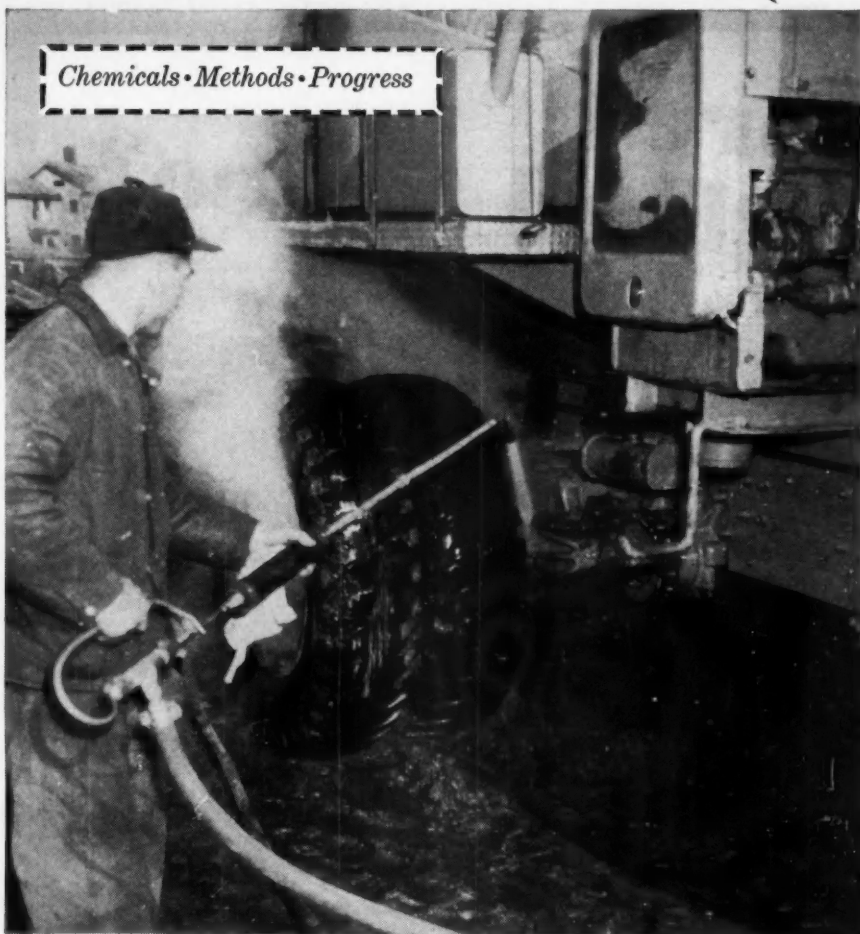
provides comfort and safety through passenger car smoothness of ride, wide-deep driver vision and short-turn-radius maneuverability.

You will cut maintenance costs, get greater protection for your cargo and reduce driver fatigue with the new Divco "Dividend Series" trucks. Phone your Divco dealer now for full information and a demonstration without obligation.

**DIVCO CORPORATION, 22000 HOOVER ROAD
DETROIT 5, MICHIGAN**

DIVCO TRUCKS

OVER 200,000 DIVCO TRUCKS IN SERVICE WORLDWIDE



Most Efficient Steam Cleaner Ever! Prove it! Make this Free Test!

With the introduction of Magnus 115 *Liquid Steam Cleaner*, you can use the first superior cleaner that costs less per application . . . and does a more effective cleaning job.

Prove it to yourself and get these advantages:

- | | |
|------------------------------|----------------------------|
| 1. Most efficient cleaning | 5. No caustic fog |
| 2. No pre-mixing | 6. Easier dispensing |
| 3. Completely safe to handle | 7. Free rinsing |
| 4. No waste | 8. Works with all machines |

Don't take our word for its effectiveness . . . make this Free Test. Order a 15, 30, or 54 gallon drum of Magnus 115. Don't pay for it. Use it for 30 days. If you're not completely satisfied that Magnus 115 is the best steam cleaner you have ever used, return the unused portion for full cancellation of the order.

Write to Magnus, 38 South Avenue, Garwood, N. J., and order a drum. You be the judge.



AUTOMOTIVE DIVISION
MAGNUS CHEMICAL CO., INC.

Micro-Siping

Continued from Page 132

level and the result is hundreds of running inches of sharp edges in contact with the road. The bars of rubber on a micro-siped tire can be likened to a miniature track-laying caterpillar. This can be observed by examining the tire pattern left in snow or mud.

Experience & Tests

The road surface, regardless of what it may be, must be compressed under the loaded tire to a point where it is able to support the load in pounds per square inch of tire area involved. When this point of compressed surface is reached, the tread rubber is compressed between the road and the supporting air in the tire. At this point, each of the cleats of rubber in a siped tire tries to seek a lower level and becomes an individual tractive unit conforming to the irregularities of the road surface. As the wheel on which the tire is mounted rolls forward or backwards, the blocks of rubber act individually moving in and out to create a vertical thrust against the road surface.

Improved Stopping

Innumerable tests with micro-siped tires on a vehicle with good brakes prove greatly increased stopping ability on snow, ice, wet paving blocks, wet leaves and wet asphalt. On many occasions, vehicles with good brakes and micro-siped tires have been tested for emergency stopping on dry asphalt pavements. In such instances, no definite conclusions have been arrived at for the reason that the asphalt has been actually gouged out of the road surface.

Experienced drivers, running tests on wet paving blocks in tractor-trailer combinations, have been unable to bring about a jack-knifing action. With well maintained brakes and micro-siped tires, the problem of jack-knifing with tractor-trailers is solved.

(TURN TO PAGE 136, PLEASE)

ONLY THOR OFFERS AN IMPACT WRENCH FOR EVERY JOB!

Automotive service industry's
largest choice



THOR NO. 55 SPEEDWRENCH

The fastest selling impact wrench on the market

ELECTRIC IMPACT WRENCHES



THOR EW-6
SILVERLINE 1/2" SQUARE DRIVE



THOR EW-10
SILVERLINE 3/4" SQUARE DRIVE



RIGHT ANGLE ATTACHMENT

Can be used on ANY 1/2" Square Drive impact wrench either air or electric. Compact size assures reaching those hard-to-get places in engine and body work.



Kits available including tools, carrying case, variety of hexagon sockets.



INCREASE your profits and speed up bolt setting and removal on engine and wheel jobs—body and frame work.

Pick out the impact wrench you want and ask your Thor automotive jobber for a free trial.

Remember all Thor automotive air and electric tools can be purchased on an easy payment plan.

AIR IMPACT WRENCHES



THOR A2W
1/2" SQUARE DRIVE



KITS AVAILABLE FOR A2W and A4W

Including tool, wrenches, right angle attachments, six sockets of varying size and metal carrying case.



THOR A4W
3/4" SQUARE DRIVE



THOR A5W
1" SQUARE DRIVE



RIGHT ANGLE ATTACHMENTS

For A2W, A4W, A5W
Detachable - Adjustable
to 6 Positions



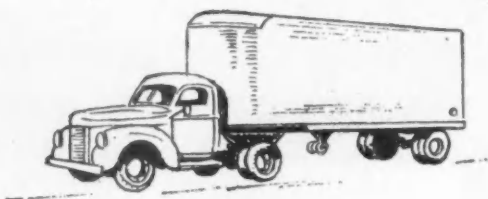
THOR HEAVY DUTY
48HG WRENCH
1" Square Drive—handles
3/4" bolt capacity



THOR HEAVY DUTY
A7W WRENCH
1" Square Drive—handles
1 1/4" bolt capacity

THOR POWER TOOL COMPANY Aurora, Illinois

Atlanta • Birmingham • Boston • Buffalo • Chicago • Cincinnati • Cleveland • Denver • Detroit • Houston • Los Angeles • Milwaukee • Newark • Long Island City, N.Y. • Philadelphia • Pittsburgh • St. Louis • Seattle • San Francisco • Toronto, Canada • Export Division, New York City



ERIE WHEELS

High in the Tradition of Transport



ERIE MALLEABLE IRON CO.
ERIE, PENNSYLVANIA



Micro-Siping

Continued from Page 134

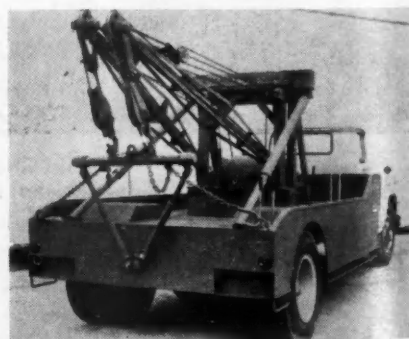
tor-trailer combinations can be virtually eliminated. The reason for this is, that with an average four axle tractor-trailer combination, there are approximately 240 ft of gripping edges in the tire treads that are conforming to and gripping the surface of the road when brakes are applied.

Wear & Safety Factors

It is frequently asked, "Should all tires on a vehicle be micro-siped—including the front tires?" In our opinion, yes! This provides for the ultimate in safety! Micro-siping front tires is a definite aid to braking but, even more important, a distinct advantage is to be found when negotiating curves or rounding corners. The front wheels of a tractor, in a tractor-trailer combination particularly, resist deviation from straight line travel, even at reasonable speeds. When going through a curve, there is a tendency for the vehicle to push straight ahead even

(TURN TO PAGE 138, PLEASE)

10-Ton Wrecker



This 10-ton capacity, double boom, wrecking crane just introduced by Manley Division, American Chain & Cable Co., York, Pa., is the largest in the company's line. Booms on the new unit work together or independently. Free swinging, both can be operated on either side of the truck or set up in spread eagle fashion. This permits wrecker to stay on solid highway, saves back-in time. Weight of unit with all attachments is 3300 lb. Maximum pulling capacity is 40,000 lb. For further details on features of this model, circle P37 on the postcard on page 84.

CREZON FUSED PANELS... All purpose plywood

This Crezon faced exterior grade fir plywood is so extensive in application and size range that the Lumber Dealer can greatly reduce the number of items in his inventory by stocking it. CREZON PANELS replace various types of plywood, shelving stock, asbestos board, steel and aluminum siding, and numerous other materials. Available with either one or two side facing, it is economical and highly practical for almost every type of installation.

CREZON PANELS serve the Prefabricated Homes Builder perfectly as an exterior and interior plywood. Weatherproof and resistant to chemicals and fungus growth, the surface inhibits grain rise and holds paint for years without checking. In utility or rumpus rooms, garages, and other hard usage areas, CREZON PANELS present a durable, attractive surface even unpainted. Being made with waterproof glues and further protected by a plastic "skin", they are highly desirable in constructing kitchens, bathrooms and laundries.

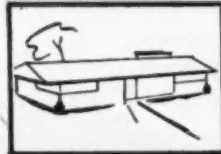
The Mobile Homes Manufacturer can form CREZON FUSED PANELS to extreme radius on exterior and interior walls, and will find it an excellent material for cabinets, sink tops and other applications throughout the trailers. Cabinet and sliding doors work smoothly without sticking because warpage is minimized.

Commercial Truck and Trailer Manufacturers can rely on CREZON PANELS for the rugged strength and tough surface demanded of their materials. Severe tests have proven its qualities of extremely high resistance to abrasion, splitting, surface denting, and warping. CREZON FUSED PLYWOOD endures long after other materials have rusted out or otherwise deteriorated.

THESE APPLICATIONS, TOGETHER WITH COUNTLESS OTHERS, MAKE
CREZON PANELS . . .



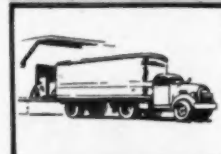
LUMBER DEALERS



PREFAB CONSTRUCTION



MOBILE HOMES BUILDERS



COMMERCIAL TRAILER
MANUFACTURERS

THE UNIVERSAL TYPE PLYWOOD

STRENGTH—The CREZON PANEL's facing increases the already enormous strength of exterior grade plywood, making it somewhat stronger and more rigid. On some structures CREZON FUSED PLYWOOD siding has eliminated the need for bracing and sheathing, resulting in considerable savings on man hours and material.

DIMENSIONAL STABILITY—CREZON PANELS are unaffected by extremes of temperature and humidity, thus reducing grain rise and warpage to a minimum.

FLEXIBILITY—CREZON FUSED PLYWOOD (in the thin panels) may be curved to extreme radius without rupture or disfigurement to the face, and nailed, stapled, or glued to a framework for unusual designs in modern architecture.

PERFECT PAINT SURFACE—CREZON PANELS, when painted, show none of the defects that normally present a problem, and will present a marvelous surface for years and years.

COMPLETE SIZE RANGE—CREZON FUSED PLYWOOD PANELS are standard in thicknesses of $\frac{1}{4}$ ", $\frac{5}{16}$ ", $\frac{3}{8}$ ", $\frac{1}{2}$ ", $\frac{5}{8}$ " and $\frac{3}{4}$ " with one piece panels to 48"x120". Other thicknesses are available, and larger sizes may be had by scarfing.

SIMPLIFIES WOODWORKING—The CREZON overlay keeps the wood fiber firm and tight for sawing, planing, grooving, routing, etc., without danger of splitting out or splintering, whether the cut is with or against the grain.

For Increased Profits
and More Satisfied Customers,
Get CREZON FUSED PLYWOOD PANELS!

Write, Wire, or Phone your nearest KOCHTON
warehouse for complete details.

BRANCH WAREHOUSES

LOS ANGELES, CALIF. 6459 E. FLEET STREET RAYmond 3-3651	SOUTH BEND, IND. 1013 S. MAIN STREET ATLantic 7-7715
CHICAGO 7, ILLINOIS 509 W. ROOSEVELT RD. TAyler 9-0800	DETROIT, MICHIGAN 8800 HOWELL AVENUE TYler 8-2000
FORT WORTH TEXAS 2505 N. E. 33rd STREET VINewood 2878	SAGINAW, MICHIGAN 1234 RUST STREET Phone 3-5493
DECATUR, ILLINOIS 3000 N. 22nd STREET Phone 3-9741	GRAND RAPIDS, MICH. 224 GRAHAM, S. W. GLendale 6-5466
INDIANAPOLIS, IND. 777 NORTH TIBBS MElrose 6-3485	GREEN BAY, WIS. 1449 S. BROADWAY HEmlock 2-4879
CINCINNATI, OHIO 3250 FREDONIA AVE. CApitol 1-1259	MILWAUKEE, WIS 500 S. ELEVENTH STREET ORchard 2-6730
COLUMBUS, OHIO 1273 EDGEHILL RD. AXminster 4-3507	MINNEAPOLIS, MINN. 601 74TH STREET, N.E. STerling 9-2444



KOCHTON
PLYWOOD AND VENEER CO. INC.

GENERAL OFFICES & WAREHOUSE

509 West Roosevelt Road • Chicago 7, Illinois • Phone TAyler 9-0800

COMMERCIAL CAR JOURNAL, January, 1956

CALL US ON ALL YOUR LUMBER AND PLYWOOD NEEDS.

Immediate delivery from our 14 well-stocked warehouses by company trucks — CL or LCL shipment from the finest mills.

Mixed carloads of plywood and lumber are available.

Micro-Siping

Continued from Page 136

with the front wheels turned in the direction of the curve. With front tires properly micro-siped, the vehicle is much easier to control and this is particularly true on wet pavement or again on ice or in snow.

The wear or life factor of the micro-siped tire has been found to

be equal to or better than the tire that has not been micro-siped. Many operators have reported that, in addition to obvious safety advantages, micro-siped tires wear longer. One of the reasons for longer life could be a cooler running tire. The blocks of rubber in a micro-siped tire have a chance to separate slightly, one from the other, at each revolution of the wheel. This gives air a chance to circulate briefly be-

tween the rubber blocks. Air, being a reasonably good conductor of heat, will enable the tire to run cooler. Also, in the case of dual tires mounted on one hub, micro-siping of the tires will eliminate much, if not most, of the usual radial scuff experienced as a result of turning corners and negotiating curves. With the rubber blocks in a micro-siped tire constantly adjusting to the surface of the road under load, a differential action is introduced in a dual wheel, on a tractor for instance, which helps to eliminate undesirable wear. The fact that a tire can be micro-siped a second time also indicates that virtually all of the rubber can be used before the tire is ready for re-capping (or the scrap heap), maintaining excellent tractive ability throughout its life.

Constant Traction

With a micro-siped tire virtually geared to the road, slippage is largely eliminated as a result of having what might be called almost "constant traction." The faster stop obtained also indicates an improved life factor for brake materials, such as liners and

(TURN TO PAGE 140, PLEASE)

Plastic Conversion Top



With this one-piece molded plastics cover just introduced by Eastern Glas Laminates, Inc., Meyersdale, Pa., $\frac{1}{2}$ or $\frac{3}{4}$ -ton open-bed pick-up trucks can be converted to panel models. Light weight, weatherproof and rugged, the new cover can be installed in about 5 min, can be removed in about the same time. Constructed of fiber glass reinforced plastic, the covers are available in several models. One has windows and a rear lift door, another—more commercial—has no window or rear door. A third version has been adapted for sportsmen and campers. Covers will fit Chevrolet, Dodge, Ford, GMC, International and Willys trucks. They can be spray painted almost any color. Circle P36 on the postcard on page 84 to obtain further details.



use only
**FACTORY NEW
GENUINE
BENDIX DRIVES
and
PARTS!**



You can be proud of every repair job when you use only genuine parts. When it comes to servicing Bendix* Drives, be sure to use only *factory new* Bendix Drives and Parts. This means your customers will get the same dependable performance built into every original Bendix Drive—performance proven by over 100,000,000 installations. Insist on *factory new* Bendix Drives and Parts when you order from your distributor.

*REG. U.S. PAT. OFF.

Bendix Drive

ECLIPSE MACHINE DIVISION of **Bendix**
ELMIRA, NEW YORK

Export Sales: Bendix International Division, 205 East 42nd St., New York 17, New York

"We

"In Nashville local and l
Until we st
we had trou
ures. This
money and
customers
arrive on t
"However
that we hav
failed to m
because of
lubrication
deposits in
pletely eli
recommen
operators

Like Mr
operators
more on l

T. Herschel
agent-memb
in Nashville,



"We unhesitatingly recommend T5X Motor Oil..."

"In Nashville we operate a fleet of 11 local and long distance moving vans. Until we started using T5X Motor Oil we had trouble due to lubrication failures. This was costly to us both in money and in the good will lost from customers whose furniture failed to arrive on time.

"However, during the past two years that we have been using T5X we haven't failed to make a single delivery on time because of mechanical difficulty due to lubrication failure. Carbon and sludge deposits in our engines have been completely eliminated. We unhesitatingly recommend T5X Motor Oil to truck operators everywhere."

Like Mr. Hudgins, experienced fleet operators everywhere rely more and more on Union's T5X Motor Oil to

assure trouble-free operation on local and over-the-road hauling equipment. If you haven't yet acquainted yourself with the many advantages of using T5X we suggest you contact your nearby Union Oil representative for further details.

UNION OIL COMPANY

OF CALIFORNIA

Los Angeles: Union Oil Bldg.

New York: 45 Rockefeller Plaza

Chicago: 1612 Bankers Bldg.

New Orleans: 644 National Bank
of Commerce Bldg.

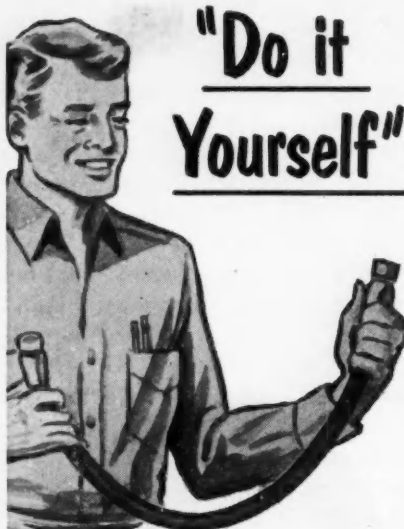
Atlanta: 401 Atlanta National Bldg.

Kansas City, Mo.: 612 W. 47th St.

76

T. Herschel Hudgins, Hudgins Moving and Storage,
agent-member of United Van Lines, Inc.
in Nashville, Tennessee

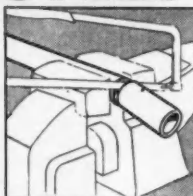




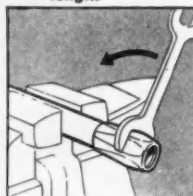
WITH
STRATOFLEX

Hose and Fittings

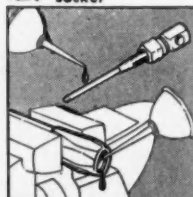
Making up hose assemblies in your own shop or in the field often saves valuable time. The cost of replacing hose lines can be drastically reduced by installing new STRATOFLEX Hose and reusing the detachable fittings. It pays to keep on hand a supply of STRATOFLEX Hose and reusable Fittings. Order from your dealer or write for Bulletin S-2.



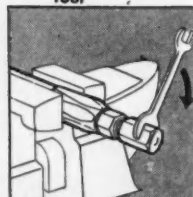
1. Cut hose to length



2. Screw on socket



3. Oil inside and insert assembly tool



4. Screw swivel nipple or male fitting into socket and remove tool



STRATOFLEX, INC. FORT WORTH, TEXAS
P. O. BOX 10398

— BRANCH PLANTS —
LOS ANGELES AND TORONTO

SALES OFFICES

ATLANTA • CHICAGO • NEW YORK • SAN FRANCISCO
DAYTON • HOUSTON • KANSAS CITY • PORTLAND • TULSA

IN CANADA

STRATOFLEX OF CANADA, INC. TORONTO 18, ONTARIO

Micro-Siping

Continued from Page 138

drums. We have had many reports that fewer brake adjustments are necessary on vehicles equipped with micro-siped tires.

In New England, many major operators are now specifying that all commercial vehicle tires be micro-siped. These major companies include many of the nationally known oil companies and a large number of other fleet operators, both small and large. Many of the larger bus companies either have programs or are instituting programs to have all tires micro-siped. Government agencies have become interested to the extent where exhaustive testing is now taking place. Major tire companies, long interested in this problem, are also running exhaustive tests with results that are more than just promising. Considering the advantages, the cost of micro-siping tires is very reasonable.

Official test figures cannot be released at this time. However, it can be unofficially said that a passenger car, with good brakes and micro-siped tires, will stop approximately 35 per cent faster on wet asphalt than is possible with the same tires not micro-siped. Heavily laden vehicles, such as a tractor-trailer combination where weight is such an important factor, will show the equivalent, if not far in excess of this performance. This unofficial statement is based on our experience, that of many drivers employed by our customers, and the experience of the inventor who has micro-siped tires for all types of vehicles.

END

Please Resume Reading Page 80

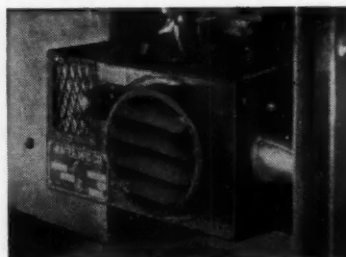
Maintenance Steno: "Gee, honey, don't you think I'm lucky to have such a fine man as Joe? Everything he touches turns to gold."

Tire Shop Typist: "Gosh, you must be worth a million!"



An Important Man
DESERVES THE BEST

HUNTER Gasoline-Burning Heaters FOR GAS OR DIESEL RIGS



- Sure safe heat, thermostatically controlled
- Shirtsleeve warmth in coldest weather
- Sub-zero starting, unfailing combustion
- Conform to all ICC regulations
- Operate independent of vehicle engine
- Eliminate costly engine idling
- Economical, compact, easy to install

Write for descriptive literature, specifications, prices.



HUNTER MANUFACTURING CO.

1550 EAST 17th STREET, CLEVELAND 14, OHIO

Avoid

PE

C



Equal Pres



... Me



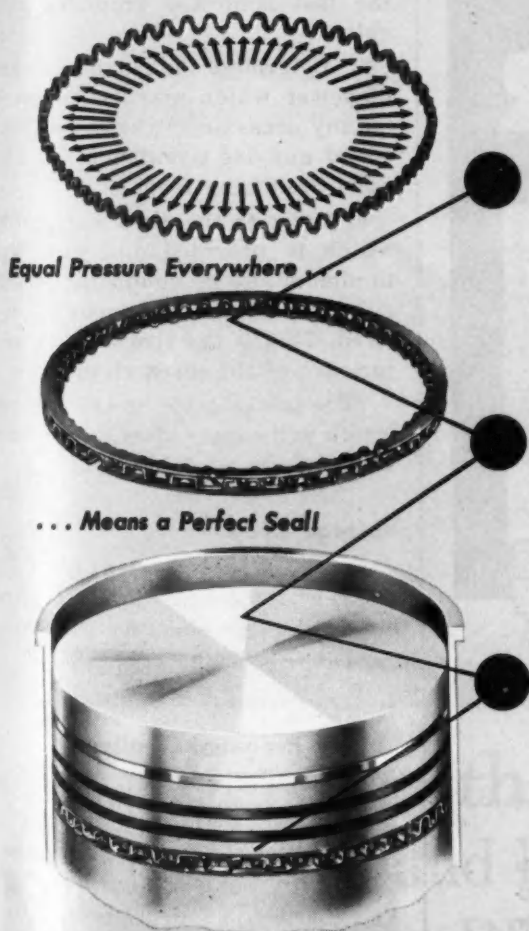
WILKE

In Canada: W

Avoid Many Costly, Time-Consuming Overhauls with

PEDRICK FORMFLEX

Chrome "RING JOBS"



Keep your fleet on the move . . . making money! You can eliminate many complete engine overhauls when you re-ring with Pedrick Formflex Chrome Ring Sets. A Pedrick "ring job" brings an engine back to life and cuts costly fuel and oil waste . . . with a minimum of labor, parts and downtime.

The secret is the exclusive Pedrick "Equalizer" that provides a soft but positive, uniform pressure *all around the cylinder wall* . . . assuring the greatest ring conformability. Before you do a costly engine overhaul, consider a Pedrick "ring job" and get that engine back into satisfactory service in a hurry; and at less cost for labor and parts!

CHROME TOP RINGS IN EVERY HEAVY-DUTY SET

Pedrick Precisioneered Chrome top rings resist heat, eliminate the danger of scuffing, last up to 4 times longer. Made from a centrifugally-cast special alloy . . . they just won't break even under the heaviest loads.



**A "NEW ENGINE"
IN EVERY BOX!**

WILKENING MANUFACTURING CO.

Philadelphia 42

In Canada: Wilkening Manufacturing Co. (Canada) Ltd., Toronto

DEPEND ON

Pedrick

FOR THE RIGHT RING JOB!

Uniform Lighting Standards

Continued from Page 92

in combination with an ATA 7-prong connector.

Below is the color wiring code as recommended in Spec. E-1-1950:

Conductor No.	Wire Color	Lamp and Signal Circuits
1	White	Ground return to towing vehicle.
2	Black	ICC required marker and clearance lamps.
3	Yellow	Left hand directional signal.
4	Red	Stop lamp.
5	Green	Right hand directional signal.
6	Brown	Tail lamp, marker lamps, clearance or marker.
7	Blue	Auxiliary circuits.

All wire from the coupler to the lamp body shall be contained in a conduit of such a material and design that the wire will be protected from moisture and abrasion. The conduits are to be positioned in such a manner that they are free from chafing, suitably clamped to a rigid member at regular intervals. Trailer wiring within the conduit shall be of such that all circuits may be replaced or repaired from the outside of a fully loaded and locked body.

Wire Gage Size

To determine the wire gage size the Council suggests:

1. Measure the required length of the main feeder circuit from the battery through the switches and ammeter to the junction with the last lamp for grounded circuits.

2. Determine the maximum candlepower which may be expected on any occasion in the lamp sockets of any one circuit and all circuits branching from it.

3. Refer to the wire gage table which is provided and find the minimum size of conductor which will permit the candlepower desired. This is the size wire to use for each of the seven circuits.

(The power cable on the tractor which will supply circuits 2, 6 and 7 shall be at least 12-gage.)

Voltage Drop

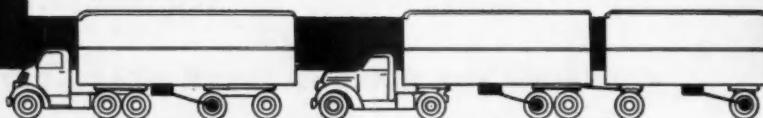
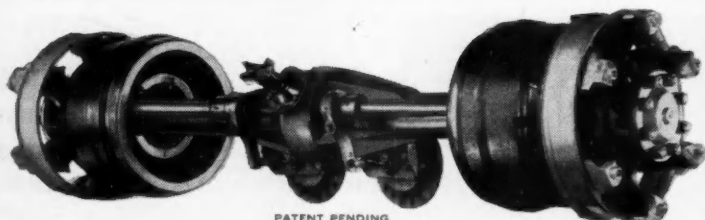
A maximum voltage drop of 15 per cent has been allowed for circuit variables such as switches, (TURN TO PAGE 144, PLEASE)

Pregnant Trailer



This custom-designed two-way trailer used by Indianhead Truck Line, St. Paul, Minn., hauls 6500 gal gasoline cargoes on outbound trip from the Twin Cities, then 40,000 lb of grain on the return trip. Grain compartment is in center with gasoline compartments at each end. Grain is loaded by gravity through hatches at top, unloaded in about 2 min in level position through hopper bottom.

GRICO... POWER CONVERTER



- A LIVE AXLE WITH A LOAD CAPACITY OF 18,000 POUNDS TO FURNISH POWER FOR: REFRIGERATOR EQUIPMENT, FANS, PUMPS AND OTHER MECHANICAL DEVICES.

- OPTIONS AVAILABLE ON WHEELS — BRAKES AND TRACK.

- COMPLETE AXLE WEIGHT WITH WHEELS IS APPROXIMATELY 950 POUNDS.

- INSTALLATION: CAN BE INSTALLED IN ANY TRAILER.

- SERVICEABILITY: STANDARD PARTS — AVAILABLE ANYWHERE.

Modern transportation demands higher payloads over longer distance . . . the GRICO POWER CONVERTER Axle answers this demand. Upon installation of the GRICO "P.C." you gain 500 pounds payload plus all the necessary power your trailer needs for its mechanical equipment while in motion.

The new GRICO "P.C." is the new axle for the new trend in trailer transportation . . . and is made by GRICO, famous for over twenty-five years in the manufacture of quality axles.

GRICO TWO AXLE DRIVE COMPANY

1910 W. EIGHT MILE ROAD
DETROIT 19, MICHIGAN

to the
d in a
nd de-
pro-
asion.
tioned
y are
lamp-
egular
within
n that
or re-
fully

re size

length
from
itches
n with
d cir-

m can-
pected
o sock-
all cir-

e table
d the
which
er de-
to use
ts.

tractor
6 and

o of 15
or cir-
itches,
ASE)



o-way
ck Line,
al gaso-
p from
lb of
in com-
gasoline
Grain is
atches at
in level
m.

ry, 1956



Don't miss the point when you're selling brake linings and blocks. One simple fact tells the whole story. BENDIX-ECLIPSE is on more new vehicles than any other make.



MARSHALL-ECLIPSE DIVISION OF **Bendix** TROY, NEW YORK
AVIATION CORPORATION

Lighting Standards

Continued from Page 142

contacts, bulb contacts, branch circuits, couplings, corrosion and deterioration. The maximum candlepower shown on the specifications chart is calculated on the basis of amperage per candlepower value which, due to the variables involved, is somewhat more than any of the amperage per candle-

power values shown for the various recommended bulbs that appear in the current SAE Handbook. The allowances are sufficient to guarantee a minimum voltage of 85 per cent of the normal battery system at the lamp socket.

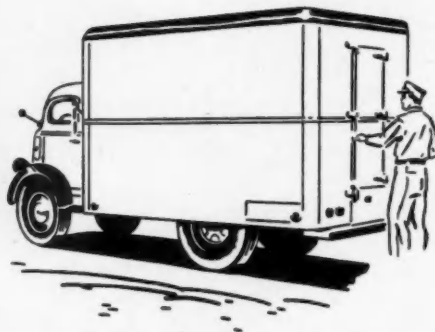
It is impossible to reproduce here the color wiring diagram and the various color lamp location guides used by the Council in showing how these standards are to be applied to various types of bodies. The fleet operator is urged

to procure these specifications directly from the Equipment and Maintenance Council, American Trucking Assns., 1424 Sixteenth St., N. W., Washington 6, D. C. Charles Hoffman, engineer for the Council, will supply members as well as other fleetmen with the complete lighting and wiring standards upon request. It is urged that all fleets examine this specification in detail and take steps to standardize lighting in the interest of improved highway safety and maintenance economies.

END

Please Resume Reading Page 94

*"On-the-truck
Performance"*



**makes EberHARDWARE the
BIG FAVORITE WITH TRUCK BODY
BUILDERS & FLEET MAINTENANCE SHOPS**

Eberhard

HINGES
LATCHES
DOOR IRONS
DOOR CONTROLS
DOOR HOLDERS
SEAT IRONS
LOCK HANDLES
SEAT PEDESTALS
LOCKS
REFRIGERATOR
PANEL DOOR
VAN BODY
SLIDING DOOR
ROPE HOOKS
LADDER HOLDERS
ETC.

Truck body builders everywhere tell us Eberhard "on the truck" hardware installations pile up astounding service hour records in view of the constant truck operation schedules in force.

Eberhard products have consistently maintained modern styling, yet retained durability with easy, smooth operation.

The New Catalog No. 15 illustrates and describes many new items. Write for your copy.

**EBERHARD MANUFACTURING COMPANY
EVARTS AVE. • CLEVELAND 4, OHIO**

Division of the Eastern Malleable Iron Company



**LONG
RUN**

**TRUCK BODY
HARDWARE BY
EBERHARD**
THE MOST COMPLETE LINE AVAILABLE

Reefer Service

Continued from Page 77

ter tractor, hook it up to the reefer, bring the trailer into the garage, and uncouple. Almost as much time was required after servicing to take the trailer out and bring the next one in. Since mechanics receive \$2.50 an hour, costs of moving each unit here were high. Spector officials say the servicing rig has eliminated about 75 per cent of this labor charge.

Another nice thing about the field rig is that it can go to work while the reefer is being unloaded at the dock. This was impossible, of course, when the trailer had to be pulled into the garage. As a result, there has been a substantial reduction in the amount of servicing time required by each reefer between trips.

END

Please Resume Reading Page 78

Steno May: "What's the difference between a Chinese mandarin waving a palm fan over his servant and an Eskimo sitting on a cake of ice?"

Steno Fay: "What is the difference?"

Steno May: "The mandarin is fanning his coolie."

s di-
and
frican
enth
D. C.
r the
s as
the
iring
t is
this
take
g in
hway
mies.

94

ge 77

the
to the
st as
r ser-
t and
me-
costs
were
e ser-
about
ge.

t the
work
loaded
ssible,
ad to
As a
antial
t ser-
reefer

e 78

erence
waving
and an
?

differ-

is fan-

y, 1956



Mr. Clarence E. Shoup, Driver

can give you the same efficiency they MOTOR FREIGHT EXPRESS, INC.!

The System's 470 Bendix-Westinghouse Air Brake-equipped rigs roll up an annual total of over 13,102,078 miles at an actual compressor operating cost of only \$0.0032 per mile . . . they maintain an average brake lining life of over 75,000 miles, while stopping loads which average 20,000 pounds per unit . . . they increase driver confidence and efficiency, helping to establish better trip records while compiling safety records far above the national average . . . and they have helped in lowering the System's insurance rates. In addition, this operation under a rigid preventive maintenance program takes advantage of Bendix-Westinghouse Repair Exchange Service by auto-

matically replacing compressors with genuine factory-rebuilt units every 150,000 miles.

While such a record is outstanding, it is by no means unique. Literally thousands of the nation's truck operators have experienced similarly profitable results with Bendix-Westinghouse Air Brakes. Why not follow their lead—specify Bendix-Westinghouse on your next new truck order . . . or consult your local Bendix-Westinghouse Distributor about converting your present vehicles to air with field installation kits. Either way you'll join Baltimore Transfer Company and Motor Freight Express, Inc., in agreeing that Bendix-Westinghouse Air Brakes are tops in stops!

Bendix-Westinghouse than with all other air brakes combined!

Bendix-Westinghouse



AIR BRAKES

BENDIX-WESTINGHOUSE AUTOMOTIVE AIR BRAKE COMPANY • General Offices and Factory — Elyria, Ohio • Branches — Berkeley, Calif.; Oklahoma City, Okla.



There's no such thing as "normal" conditions in the fleet business!

One mile like this in every five thousand is reason enough for using a BLUE STREAK heavy duty ACC-560 coil. With its aluminum housing and extra-large horizontal fins, this air-cooled coil can dissipate heat as fast as it's generated, even when the truck is laboring up a steep hill through deep snow. When an engine is under that kind of strain BLUE STREAK heavy duty ignition parts installed on your fleet can make the difference between getting through and not. Standard Motor Products, Inc., 37-18 Northern Boulevard, Long Island City 1, New York.



Blue Streak

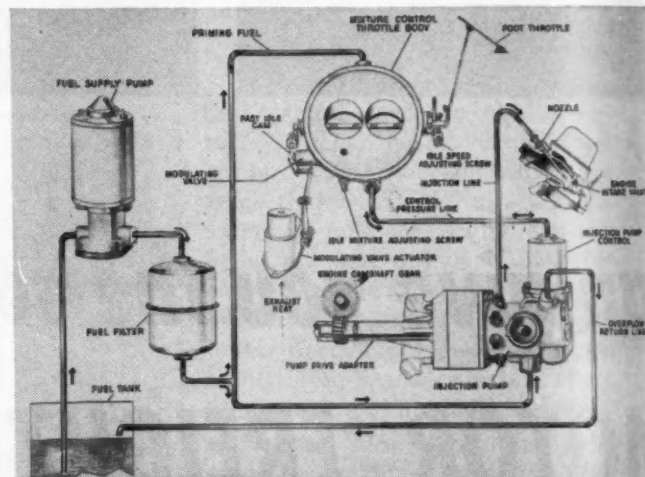
Pioneers in Heavy-Duty Ignition

Gasoline Injection System

AN INJECTION system for gasoline engines has been designed by American Bosch Arma Corp. to replace the carburetor. In this system, gasoline is injected directly into the engine either at a point in the manifold just above each intake valve or directly into the cylinder itself. It is said to result in more uniform distribution of fuel.

The American Bosch system consists of a small, simple fuel metering and injection pump, a mixture or fuel-air-ratio control, an electrically-driven fuel supply pump, injection discharge lines and nozzles, and a fuel filter. The motor-driven supply pump supplies fuel through the filter to the injection pump maintaining fuel pressures well over the service vapor pressure of gasoline.

The injection pump is a simplified single-plunger type with the plunger reciprocated by means of an integral face cam to pump the fuel and at the same time rotating to distribute fuel to each engine cylinder. The positioning of a sleeve on the plunger controls the amount of fuel injected. A control mechanism is attached to the injection pump which receives a control pressure from the mixture control and translates it through a shaft to the plunger's metering sleeve.

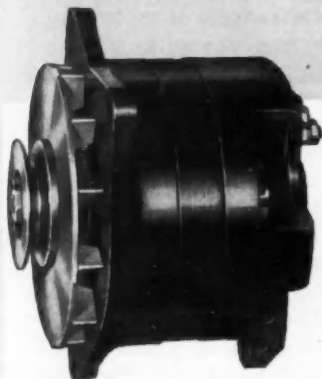


The mixture control is a manifold pressure type with throttles linked directly to the accelerator pedal. A chamber in the mixture control feeds a modified manifold pressure to the injection pump control during cold starting and idling. Injection nozzles are of the simple poppet type. In the present system these are located in the manifold directly above each intake valve.

The new system has many potential advantages over carburetion according to American Bosch. More accurate fuel distribution to each engine cylinder results in improved fuel economy since no cylinder is obliged to run too rich in order to insure that none runs too lean.

Leece-Neville

12 VOLT ALTERNATORS FOR YOUR '56 FLEET

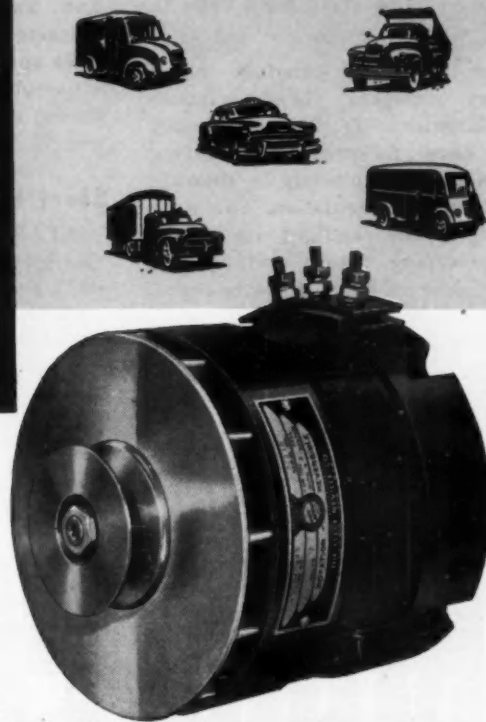


**L-N
Standard
Alternator**

This is the 12 volt version of the latest L-N Alternator, that actually costs less than "extra" output d.c. generators. Typical Leece-Neville quality. Output: 50 amps at 12 volts (equal to 100 amps at 6 volts).

A RIGHT SIZE L-N ALTERNATOR FOR EVERY NEED

For 6 volt systems capacities range from 55 amps to 95 amps. Alternators from 30 to 180 amps are available for 12 volt systems. Also for 24 and 32 volt vehicles. L-N Alternators weigh much less than comparable d.c. generators.



L-N Heavy-Duty Alternator

This 12 volt L-N Alternator is mechanically the same as the familiar Type 5058, the 6 volt, 95 ampere L-N Alternator that has been proved on thousands of cars and trucks since 1946. It delivers up to 60 amps at 12 volts. L-N Transformer can be attached to give up to 800 watts of 110 volt portable power.

EITHER the Standard or Heavy-Duty Alternator will give your '56 fleet all the famous advantages of the Leece-Neville a.c.-d.c. generating system, including: 1 - Always a charged battery 2 - Constant voltage for longer life of electrical units 3 - Unequalled reliability and freedom from breakdown. *Be sure to specify Leece-Neville on your '56 fleet.*

There are many more advantages to Leece-Neville Alternators. If your present fleet is not Leece-Neville equipped, send for all the facts and name of your L-N Distributor. Write The Leece-Neville Company, Cleveland 3, Ohio. *Distributors in principal cities . . . Service Stations everywhere.*

**YOU CAN
RELY ON**

Leece-Neville

Automotive Electric Equipment Since 1909

TRUCK • BUS • DIESEL • INDUSTRIAL • PASSENGER • RAILROAD • MARINE • OFF-HIGHWAY



ALTERNATOR SYSTEMS



D C GENERATORS



CRANKING MOTORS



REGULATORS



SWITCHES



SMALL MOTORS

January News Roundup

Continued from Page 98

isdiction may be required to install auxiliary emergency brake systems on combinations. Traditionally, many states have followed ICC safety rules. California already is showing interest in such regulation. The state currently is overhauling its safety rules governing trucks and is suggesting some rather drastic changes,

which fleet operators are protesting. Twelve states (Ariz., Ga., Ky., La., Mass., Miss., N. J., N. Y., R. I., S. C. and Va.) have regular legislative sessions scheduled for this year. Five have special sessions scheduled where it would be possible to introduce brake regs (Cal., Colo., Kan., Md. and W. Va.).

Short Haul Carriers

ATA's Local Cartage National Conference is establishing a special section of the conference for short

haul motor carriers. LCNK defines short haul trucking service as, "The transportation of a motor carrier which may be wholly completed by a vehicle departing from, and returning to the same terminal in one working day." Objectives of the section will be to provide short haul carriers with (1) aid and assistance in regulation, taxation, legislation and labor relations, (2) information about short haul operations, and (3) meetings where subjects pertaining to short haul operations can be discussed.

Strikers Can Follow Trucks

Truck deliveries figure importantly in a new federal court ruling related to the ban against secondary boycotts. U. S. Court of Appeals has decided that the Taft-Hartley Act language prohibiting boycotts does not prevent pickets with a grievance against one company from following that firm's trucks and displaying their signs before another firm's employees. In the case in point, an Atlanta local of the Teamsters Union did this to trucks of the Campbell Coal Co., Atlanta, after calling a strike when the firm fired a number of drivers. Campbell delivers concrete by truck from its two ready-mix concrete plants to construction projects.

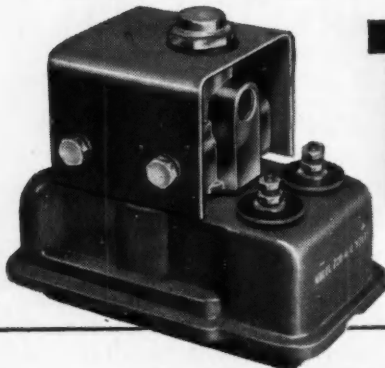
Union members picketed the plants and followed some trucks to delivery points, though there was no dispute with the construction contractors. This form of picketing was deemed illegal by the National Labor Relations Board. However, the court called it lawful, observing that Campbell drivers spent 50 per cent of their working time at projects using the firm's products. The court holds that the Taft-Hartley Act does not specifically prohibit picketing at points where complaints will be seen by employees of disinterested firms.

Truck Weights Up . . .

Preliminary estimates of nationwide motor-vehicle travel for 1955 indicate an increase of 4.6 per cent over 1954, reports the Bureau of Public Roads. Between 1940 and 1954 the total mileage driven by trucks and truck combinations increased at a much greater rate than that for passenger cars and buses. Truck travel was up 112 per cent, passenger cars 81 per cent, and buses 65 per cent, over this period. Reporting on truck weights, the article states that the weights of single-unit trucks, loaded

(TURN TO PAGE 152, PLEASE)

Less "Roadside Time" MORE PAY TIME!



STEWART-WARNER electric fuel pumps *for trucks, buses and cars*

- Operate independently of engine to assure positive flow of gas—always!
- Insure instant starts—regardless of weather. No vapor-lock!
- Heavy-duty construction. Weatherized finish, in bright green baked enamel.
- Sealed against rain and road splash!
- No bellows, pistons or rocker arms to wear. Runs cooler, lasts longer.
- Simple installation on any truck, bus or car.

See Your Dealer for Complete Details, or Write:

STEWART-WARNER

Instrument Division, Dept. DD-16
1840 Diversey Parkway, Chicago 14, Illinois



C defines
as, "The
carrier
ted by a
d return-
ne work-
e section
l carriers
in regu-
and labor
out short
meetings
to short
ussed.

icks

importantly
g related
ary boy-
ls has de-
tley Act
otts does
grievance
following
displaying
firm's em-
point, an
ers Union
Campbell
calling a
a number
vers con-
two ready-
nstruction

the plants
o delivery
no dispute
contractors.
as deemed
labor Rela-
the court
ring that
per cent
t projects
The court
y Act does
cketing at
ill be seen
sted firms.

of nation-
or 1955 in-
cent over
of Public
1 1954 the
trucks and
ased at a
at for pas-
ruck travel
enger cars
5 per cent,
g on truck
s that the
cks, loaded
(PLEASE)

January, 1956



TOPS IN TEAM WORK—ALL THREE

each does a special job

J&L's JALTEN series offers you three top performing high strength, low alloy steels with the following characteristics:

JALTEN NO. 1—High strength, good formability and fabricating—good resistance to low temperature impact.

JALTEN NO. 2—High strength, moderate forming—improved resistance to atmospheric corrosion.

JALTEN NO. 3—High strength—improved abrasion resistance.

**J&L
STEEL**

Jalten

SEND FOR THIS NEW BOOK:

Chemical properties of Jalten
Mechanical properties of Jalten
Jalten equivalents
Jalten application data

Jones & Laughlin Steel Corporation
Dept. 432—3 Gateway Center
Pittsburgh 30, Pennsylvania

Please send a copy of your Jalten booklet, **JALTEN LOW-ALLOY, HIGH-STRENGTH STEEL**.

NAME _____

TITLE _____

COMPANY _____

ADDRESS _____

CITY _____ ZONE _____ STATE _____

Jones & Laughlin
STEEL CORPORATION — Pittsburgh

COMMERCIAL CAR JOURNAL, January, 1956

48 PAGES
334 ILLUSTRATIONS

KENT-MOORE

Service
Tool
Guide

GMC
TRUCKS

Free!
New
GMC TRUCK
SERVICE TOOL
GUIDE

JUST RELEASED!

New 48-page GMC Truck Special Service Tool Manual. Contains complete information on all Kent-Moore RATE-MAKER Special Tools required to perform factory-recommended service on GMC Gasoline and Diesel Powered Trucks. Tool applications are clearly specified.

Illustrates hundreds of special service tools for servicing:

- axles
- brakes
- clutches
- transmissions
- fuel systems
- engines
- steering mechanisms
- other assemblies.

KENT-MOORE 
ORGANIZATION, INC.

ENGINEERS AND MANUFACTURERS OF
SPECIAL SERVICE TOOLS AND EQUIPMENT

FREE - SEND COUPON NOW

KENT-MOORE Organization, Inc.
5-105 General Motors Bldg.
Detroit 2, Michigan

Send me FREE copy of new Kent-Moore
Service Tool Guide for GMC Trucks.

Name _____
Title _____
Company _____
Street _____
City _____ State _____

January News Roundup

Continued from Page 150

or empty, increased about 10 per cent from 1936 to 1954. Truck combination weights increased rather steadily throughout the period—loaded weights were up some 61 per cent and empty weights about 73 per cent. Ton-mileage hauled in single-unit trucks increased from 14.3 billion in 1936 to 36.6 billion in 1954. For truck combinations, ton-mileage increased from 13.7 in 1936 to 107.3 billion in 1954.

1955 Truck Trailer Shipments*

	October	Ten Months
Vans:		
Insulated and Refrigerated:		
Steel.....	36	841
Aluminum.....	353	3,513
Furniture:		
Steel.....	158	1,476
Aluminum.....	30	184
All other closed-top vans:		
Steel.....	1,046	8,284
Aluminum.....	2,242	19,165
Open-top:		
Steel.....	232	1,571
Aluminum.....	137	2,014
Total—Value.....	4,236	37,048
Tanks:		
Petroleum.....	534	4,027
All other.....	67	561
Total—Tanks.....	601	4,588
Pole, Pipe and Logging:		
Single Axle.....	62	691
Tandem Axle.....	95	1,260
Total.....	157	1,951
Platforms:		
Racks, livestock and stake.....	118	1,085
Grain bodies.....	103	833
Platforms (flats), all types.....	801	6,711
Total—Platform.....	1,022	8,629
Low-bed heavy haulers.....	266	2,395
Dump trailers.....	131	1,754
All other trailers.....	340	3,329
Total—Complete Trailers.....	6,753	59,694
Chassis only.....	208	2,541
Total—Trailers and Chassis.....	6,961	62,235

* Industry Division, Bureau of the Census.

... Overweights Down

The number of heavy axle loads increased. In 1950 the percentage of axles weighing 18,000 pounds or more was over seven times that in 1936, but from the 1950 high there was a consistent yearly drop which amounted to 35 per cent by 1954. While the percentage of loads exceeding state legal limits by no more than 5 per cent changed little after 1950, there was a real reduction in the number of heavy overweights. Overweights of 50 per cent were rare after 1951, and overweights of 20 to 30 per cent declined noticeably. The full report appears in the December issue (Vol. 28, No. 11) of the magazine *Public Roads*, which is available from the Superintendent of Documents, Government Printing Office, Washington 25, D. C., for 20¢.

(TURN TO PAGE 154, PLEASE)

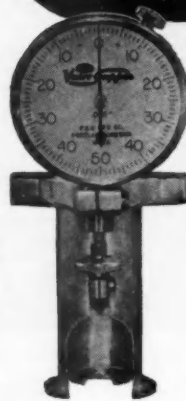
TRUCK MECHANICS • OWNERS

**Set Valve
Clearance**

**Exactly
Right!**

Every Time with

**P&G
Valve-Gapper**



**New Technique
100% Accurate**

Now you can set valve clearance on most OHV gasoline and diesel truck engines uniformly and with micrometer accuracy instead of depending upon individual "feel".

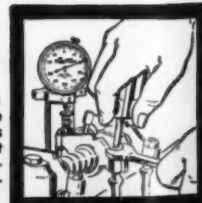
Check these
VALVE-GAPPER
advantages:

- Reduces Valve Adjustment time as much as 50%.
- Eliminates Inaccuracies of Individual "Feel".
- No Change in Adjustment Procedure; ONLY Method of Measurement Differs.
- Serviceman can "SEE" Clearance on Dial Indicator BEFORE, DURING and AFTER adjustment.
- Both Hands FREE to Use Adjusting Tools.
- Use Dial Indicator for Other Shop Tasks.

**Models Available to fit
these Truck Engines:**
**GM DIESEL • GMC GASOLINE
CUMMINS DIESEL
INTERNATIONAL HARVESTER
FORD • CHEVROLET
DODGE • REO • OTHERS**

BOTH HANDS FREE

Serviceman always has both hands free to use adjusting tools—he can "see" exact clearance before, during and after adjustment.



Order From Your Jobber or Write

P&G MANUFACTURING CO., Dept. 7-A
305 N. E. Russell St., Portland 12, Oregon

Please send me Valve-Gapper literature and prices.

Firm Name _____

Your Name _____

Address _____

City _____ Zone _____ State _____

Engines Serviced:

☐ Passenger Car ☐ Diesel

☐ Gas Truck ☐ Gas Industrial

My Jobber is: _____

OWNERS
Ive
nce
ley
ht!

e with
per

hnique
ccurate
an set valve
a most OHV
and diesel
es uniform-
micrometer
stead of de-
on indivi-

PER
Valve Adjust-
as much as

Inaccuracies
lual "Feel".
ge in Adjust-
edure; ONLY
of Measure-
ers.
on Dial Indi-
t adjustment.
Tools.
Tasks.

it
LINE
ESTER
T
ERS

Write
pt. 7-A
12, Oregon
re and prices

te
trial

January, 1956

You can WIN one of these 14 NEW *FRAM* EQUIPPED CARS



in FRAM Giant \$110,000.00 Contest!

FOR FLEET OPERATORS, DEALERS AND WHOLESALER SALESMEN!

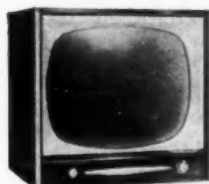
PLUS 1,204 OTHER PRIZES!



20—1st Prizes
\$1000 SAVINGS
BONDS



20—2nd Prizes
BENDIX DUOMATIC
WASHER & DRYERS



24—3rd Prizes
21" PHILCO TV SETS

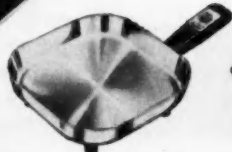


40—4th Prizes
9mm REVERE CINE CAMERAS



100—5th Prizes
BLACK & DECKER
DRILL KITS

Hundreds of
additional prizes!



It's Easy! Here's how you can win!

All you do is estimate the number of filters FRAM will ship to manufacturers during the periods named on your Official Entry Blank. Each time you enter you get two chances to win—once for the Half-Year and once for the Whole-Year Contest. See your FRAM wholesaler salesman for entry blanks, rules and hints to help you win!

FRAM CORPORATION, Providence 16, R. I.
Fram Canada Ltd., Stratford, Ontario



January News Roundup

Continued from Page 152



... James W. Boyer, appointed secretary, Operations Council, American

Trucking Assns., Washington, D. C. He was senior operations agent, Buffalo, N. Y., Capital Airlines.

... N. E. Aikin, industrial relations director, Commercial Motor Freight, elected general chairman, Commercial Vehicle Section, National Safety Council, Chicago. Other Commercial Vehicle Section officials include: Pacific Intermountain Express Safety Director K. N. Beadle, vice chairman; Interstate Motor Freight System Safety Director F. S. Lake, secretary; Standard Oil Co. of Calif. Marketing Safety Engineer Karl Schulze,

program chairman; Strickland Transportation Compliance and Safety Director L. J. Whitehead, National Fleet Safety Contest committee chairman; Automobile Shippers Safety and Personnel Director N. J. Bleau, Safe Driver Award committee chairman; East Texas Motor Freight Lines Safety Director P. E. Mondics, membership committee chairman; Allied Van Lines Safety Dept. Manager J. H. Waspi, central region chairman; Railway Express Agency Assistant General Manager of Transportation J. M. Shanaphy, eastern region chairman; Virginia Stage Lines Safety Director B. A. Rennolds, southern region chairman; and Southern California Freight Lines Safety Director, J. L. Hughes.

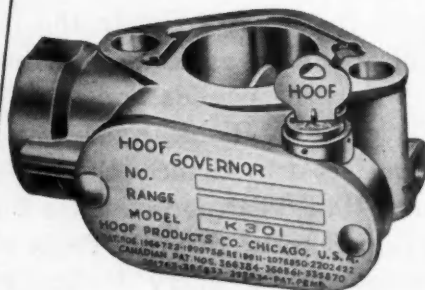
"HOOF GOVERNORS

cut both maintenance and operating costs... with no change in running times!"



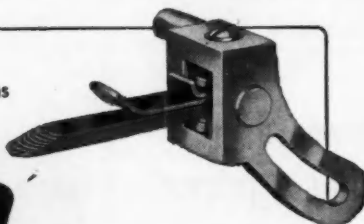
"Governed" speed doesn't necessarily mean "slow" speed. Hoof Governors simply insure that your vehicles are driven at the speed you select.

Whether this "most practical" speed is 30 mph or 60 mph, Hoof Governors provide round-the-clock protection: first, approved top speed cannot be exceeded, and second, excessive engine racing in intermediate gears is positively prevented.



Now that equipment must be conserved, Hoof protection is doubly important. Write for full facts.

A Patented, exclusive Hoof feature, this Cantilever Spring means more accurate speed control, simplified construction and longer life!



HOOF *key and seal type*
GOVERNORS

HOOF PRODUCTS CO.
6543 So. Laramie Ave.,
Chicago 38, Ill.



... F. S. Stead, promoted to replacement sales service manager, Electric Auto-Lite Co., Toledo, Ohio.

... Harry J. Wald, promoted to Ohio division manager (Cleveland), Strick Co., Philadelphia.

... John D. Van der Veer, promoted to general sales manager, Tung-Sol Electric, Inc., Newark, N. J.



... Ray Zeh and Joseph Chemerys, promoted to district managers in Chicago and Syracuse, N. Y., respectively, Lincoln Electric Co., Cleveland, Ohio.



... Joseph Horacek, Jr., appointed assistant sales manager, Turco Products, Inc., Los Angeles, Cal.

... James S. Osborne, general manager, Cincinnati, Newport and Covington Railway Co., elected general chairman, Transit Section, National Safety Council, Chicago. Other Transit Section officials include: Kansas

(TURN TO PAGE 156, PLEASE)

For
valve

are

Now you can
Vibro-Centr
you need for
power come
Decker Vib
motor recor
cause it's ex
—eliminate
balanced po
fatigue, cut
new kits h
pilots and s
of Driver, I
kit box prot

No. 605 S
includes: 5
Dressing S
sleeves, pil
Top Pilots,
seat stones
for a demo
BLACK &
3901, Tows

We do
— we

The heart
motor—co
Decker. A
then some
for a spec
do! Black
stand up!

Service
B&D servi
cated "nex
give you fa

COMMERCIAL

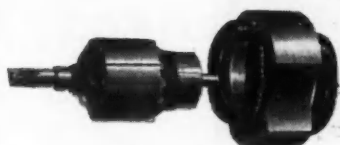
For fast
valve grinding... **Black & Decker®**

VIBRO-CENTRIC DRIVERS

are POWER-BUILT

Now you can select from one of four Vibro-Centric Kits the exact equipment you need for all seat grinding jobs. The power comes from the famous Black & Decker Vibro-Centric Driver. It does motor reconditioning jobs better because it's extremely accurate, fool-proof—eliminates "repeats"! Light-weight, balanced power guarantees less operator fatigue, cuts your cost per job. These new kits have improved selection of pilots and stones, permit easier storage of Driver, Dressing Stand. Sturdy oak kit box protects precision equipment.

No. 605 Super-Service Kit (at right) includes: 55° Heavy-Duty Driver, Dressing Stand, 2 ball-bearing stone sleeves, pilot turning wrench, 8 Gruv-Top Pilots, 5 hard seat stones, 10 soft seat stones. See your B&D distributor for a demonstration or write to: THE BLACK & DECKER MFG. CO., Dept. 3901, Towson 4, Maryland.



**We don't buy motors
—we build them!**

The heart of your electric tool is the motor—completely built by Black & Decker. All the power you need and then some—because each motor is built for a specific tool and the job it must do! Black & Decker motors always stand up!

LOOK IN THE YELLOW PAGES UNDER "TOOLS-ELECTRIC"



Black & Decker®

PORTABLE ELECTRIC TOOLS

Service... one of 42
B&D service branches is located "next door" to you; to give you fast, expert service!



SANDERS



VACUUM CLEANER



DRILLS



VALVE REFACERS

COMMERCIAL CAR JOURNAL, January, 1956

January News Roundup

Continued from Page 154

City Public Service Safety Training and Instruction Superintendent D. L. Williamson, vice chairman; Roanoke Railway and Electric General Manager R. D. Cassell, program chairman; Memphis Street Railway Safety Director J. M. Busby, Jr., membership chairman; and United Motor Coach

Safety and Transportation Superintendent Elmer R. Schuemann, secretary.



... H. I. Boggs, appointed head of Fleet Sales Division, Dayton Steel Foundry, Dayton, Ohio.

... Paul R. Stadlman, appointed Des Moines, Iowa, assistant division manager, Armstrong Rubber Co., West Haven, Conn.

... J. N. Dunn, promoted to Davenport, Iowa, motor truck district manager, motor truck division, International Harvester Co., Chicago.



... P. G. Tyrrell, promoted to Industry Manager, Rubber Tired Vehicle Accounts, Twin Disc Clutch Co., Racine, Wis.

... K. C. Deacon, promoted to vice president—truck operations manager, Dodge Division, Chrysler Corp., Detroit.

... Frank E. Farrell, promoted to director of sales, automotive products, Bendix Products Division, Bendix Aviation Corp., South Bend, Ind.



... R. D. Martin, named maintenance superintendent, Dallas fleet maintenance department, East Texas Motor Freight Lines, Dallas, Texas.



... Thomas A. Harrison, promoted to vice president, personnel, The Western Express Co., Cleveland, Ohio.

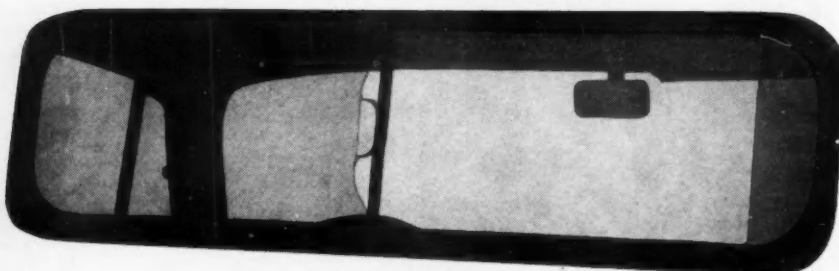
... Warren Deck, promoted to manager, St. Louis, Mo., industrial fleet sales office, Trailmobile, Inc., Cincinnati, Ohio.

... Lewis E. Minkel, appointed vice president and sales manager, Mack Trucks, Inc., New York City.



... M. S. Whittington, transferred to Chicago assistant district manager, Robert J. Peterson, promoted to Salt Lake City, Utah, assistant district manager, J. W. Briggs, transferred (TURN TO PAGE 160, PLEASE)

Barber's DeLuxe Sliding Rear Truck Windows That Really Work And Ready To Install

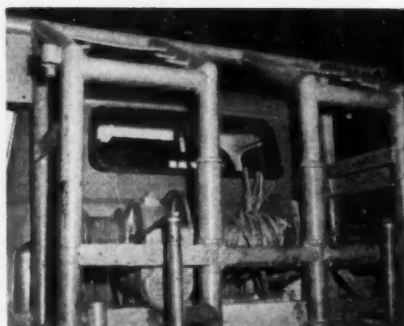


PATENTS PENDING

Less than 20 minutes to install — looks good — it stays in



IDEAL FOR HEAVY HAULING AND OILFIELD TRUCKS



1947 - 56 Chevrolet
1948 - 56 Dodge
1948 - 56 Ford
1947 - 54 G.M.C.
(up to 700 series)
1955 - 56 G.M.C.
1954 Improved, and all
1955 - 56 Internationals
1955 - 56 Diamond "Ts"
Restyled

Or a unit can be supplied for any std. cab truck, including all 1956 standard cabs, not listed here. Write for full details.



Size of package 11½"x5"x26". Average weight 12 lbs.

RETAIL PRICE
\$37.50

F.O.B. Oklahoma City
Subject to change without notice.

Barber's Well Packaged Unit may be delivered, overnight, to many areas Provides the Working Opening for Giving and Receiving Orders—Operating Controls. It provides for SAFETY and VENTILATION. Does not damage Cab—weatherproof and locks when closed.

In the Glass Business Since 1937

Barber's Glass & Manufacturing Co.

13-15 HARRISON, BOX 588, Phone FOrest 5-4358, OKLAHOMA CITY, OKLA.

Actual Service Miles! AIR SPRINGS



**Perfected by GENERAL to haul
bigger payloads at reduced costs!**

You gain valuable extra cargo space and completely eliminate costly road bounce and high-frequency vibration when you equip your trucks and trailers with service-proved General Air Springs.

By means of compensating air pressures to two individual rubber

cushions, General Air Springs automatically keep trailer bodies and loads level, reduce load shifting, keep doors tightly sealed against outside elements.

Order General Air Springs now on your new equipment or for conversion of your present units.

COMPLETE SUSPENSIONS WITH GENERAL AIR SPRINGS ARE IMMEDIATELY AVAILABLE FROM:

- Homan & Company, Incorporated,
Cincinnati, Ohio
- Krause Corporation,
Hutchinson, Kansas
- Neway Company
Muskegon, Mich.
- Spencer-Safford Loadcraft Incorporated,
Augusta, Kansas
- Tractor Corporation
Mountainside, New Jersey

The General Tire & Rubber Co.

AKRON, OHIO

**THE
GENERAL
AIR SPRING**

YOUR NEW EQUIPMENT

January News Roundup

Continued from Page 156

to Los Angeles, Calif., assistant district manager, **P. E. Thomas**, promoted to special sales representative in Hawaii, **Guy W. Reynolds**, transferred to Richmond, Va., assistant district manager, and **F. J. Wendling**, promoted to assistant district manager, Philadelphia, motor truck division, International Harvester Co., Chicago.

... **James Turman**, appointed southern California sales representative, Strick Co., Philadelphia, Pa. He was western zone manager, Time, Inc.

... **Willis C. Reich**, promoted to central region (Chicago) supervisor, coated abrasives and related products division, Minnesota Mining & Mfg. Co., St. Paul, Minn.

... **Merrill F. Yale**, promoted to district manager, Denver, Colo., branch office and warehouse, Lincoln Electric Co., Cleveland, Ohio.

for greater safety

K-D celebrates 40 years of recognized leadership



KD 767



KD 254



KD 333



KD 104



KD 600



KD 201



KD 541



KD C883



KD 506

K-D's growth from an idea in 1916 to a place of leadership in the field of automotive safety proves that *The Complete Line* fills a permanent need. The trade recognizes the advantage of one proved source of Safety Lighting and Accessories. K-D Lamp has earned a reputation for Quality Merchandise . . . progressively engineered for today's need . . . manufactured from the best materials . . . sold with policies that give a square deal to K-D's approved automotive jobbers.

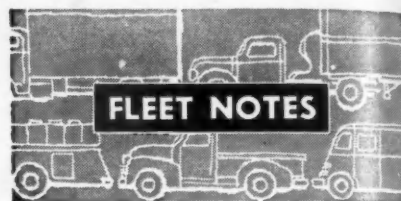
lowest last cost

Quality materials . . . know-how engineering . . . skilled workmanship . . . result in higher product costs. But usually installation expense . . . regardless of quality . . . exceeds product cost. K-D's superior quality insures longer life . . . less costly replacements . . . *lowest last cost!*



K-D LAMP COMPANY

1910 ELM STREET • CINCINNATI 10, OHIO
WAREHOUSES: BOSTON • CHICAGO • LOS ANGELES
NEW YORK • PHILADELPHIA • SEATTLE • TORONTO



Western Truck Lines, Ltd., Los Angeles, Cal., has received ICC Division 4 OK of its control of **Gillette Motor Transport**, Dallas, Texas.

Overnite Transportation, Richmond, Va., has ICC Division 4 approval of its purchase of **Lewis & Holmes Motor Freight Corp.**, High Point, N. C.

Great Southern Trucking, Jacksonville, Fla., has awarded service pins to 1100 employees with two or more years service. Four received specially designed diamond pins for 25 years of service.

Pacific Intermountain Express, Oakland, Cal., has awarded four \$1,000 scholarships to seniors in transportation at University of Washington, State College of Washington, University of Oregon and Oregon State College.

Transcon Lines, Los Angeles, Calif., has plans to purchase equipment representing a \$2 million investment. Included are 70 White Freightliner tractors and 92 closed and 25 roll-top Strick trailers.

Southern Plaza Express, Dallas, Texas, has bought 50 maximum cube trailers from Strick.

Darling Freight, Grand Rapids, Mich., has equipped 20 highway units with 60-watt mobile radio transmitters as well as two sales cars and a safety patrol car. Control central is at the Grand Rapids terminal.

Strickland Transportation, Dallas, Texas, and **Hoover Motor Express**, Nashville, Tenn., have completed plans for through trailer service of both tl and ltl freight between Dallas-Houston and Atlanta, Nashville, Knoxville, Chattanooga and Louisville.

Chicago Transit Authority plans to lease 100 buses at present to supplement the contemplated purchase of 400 buses and 330 PCC rapid transit cars during the next five years. The fleet just concluded a \$2,000 employee contest aimed at improving bus design so as to attract more traffic.

Moland Brothers Trucking Co., Duluth, Minn., has purchased 30 diesel-powered, COE International Model No. DTC-405 tractors. They will be

(TURN TO PAGE 162, PLEASE)

there
are
at
least

19

factors
contributing
to oil
contamination

... continuously causing oil contamination
build-up during normal operation ... including

PISTON RINGS ... CARBURETOR ... DISTRIBUTOR ...
SPARK PLUGS ... AIR CLEANER ... BREATHER CAP ...
RADIATOR ... TIMING GEAR ... WIRING ... BATTERY
... AND MANY OTHERS

To fully protect an engine,
an oil filter must be de-
signed to remove all con-
taminants from the oil,
especially water, the chief
cause of sludge and
source of corrosive acids.

The Walker Replacement Oil Filter
Cartridge provides complete
protection because THE WALKER
CARTRIDGE IS ABLE TO ABSORB
AND HOLD THE WATER OUT OF OIL.

.....this special water
absorbing ability helps
protect engines against
damage from permanent
anti-freeze seepage.



This free illustrated
book tells the fac-
tual story of oil con-
tamination build-
up and oil filtration
problems. Mail your
request, on your
company letter-
head, to ...

These two examples illustrate this contamination process
which is taking place all through the life of the engine:



SPARK PLUGS — normal wear causes
change of spark gap, which impairs
combustion efficiency. Faulty combus-
tion means increased oil contamination
from the blow-by of water and other
combustion by-products.

WALKER Cartridges give complete pro-
tection throughout entire engine life.



PISTON RINGS — normal wear and
carbon deposits impair the rings' ability
to form a seal with the cylinder wall.
This means increasing "blow-by" of
water and other combustion by-products
which must be removed from the oil.

WALKER Cartridges give complete pro-
tection throughout entire engine life.



WITH PATENTED *Laminar* CONSTRUCTION

WALKER MANUFACTURING COMPANY OF WISCONSIN ... RACINE, WISCONSIN ... Oil Filters ... Exhaust Silencers ... Jacks

January News Roundup

Continued from Page 160

served under the maker's guaranteed maintenance program.

T.I.M.E., Lubbock, Texas, and Southeastern Truck Lines, Nashville, Tenn., have asked ICC approval to merge into one company.

Hertz Corp., Chicago, has purchased two more New York City truck leas-

ing firms—New York Truck Renting Corp. and Storch Leasing Corp. Both companies will be merged with Hertz's Metropolitan Division. Hertz's truck leasing fleet now totals about 10,500 units.

Merchants Freight System, Terre Haute, Ind., has added 10 Model No. DC-75 Autocar and three Model No. 921-BR Diamond T tractors to its fleet. They are equipped with 10-speed, semi-automatic Model No. R-950-C Fuller "Roadranger" transmissions.

Midwest Motor Express, Bismarck, N. D., has announced purchase of Schmidt Truck Lines, Duluth, Minn.

Watson Bros. Transportation, Omaha, Neb., has purchased \$2.2 million worth of new equipment including 137 high cube trailers and 69 diesel-powered tractors for two-man sleeper operation.

Allied Van Lines, Broadview, Ill., has opened its \$300,000 terminal in Secaucus, N. J. It will serve as a consolidation point for shipments to and from Metropolitan New York.

McLean Trucking Co., Winston-Salem, N. C., was awarded top prize among truck and bus fleets in "Financial World's" annual contest for company annual reports. Second place went to Greyhound Corp., Chicago, and third to Pacific Intermountain Express, Oakland, Cal.



**MORE THAN 1,000,000
DIFFERENT SPECIES OF
Bugs
ON EARTH
But Not One in the
BARTLETT HYDRAULIC
5th WHEEL**

14" & 24" Lifting
Heights

Reinforced to Carry
Any Weights with
Little or No Service

Less Parts to
Lubricate

Pays for Itself by
Labor Saving in
90 Days

Saves Repairs to
Trailers

For Busy People Who Want to Cut Costs NOW!
Unlimited Lifting Capacity for Piggy-Back Operations. Now Used by All Truckers, Railroads, Excavators. Roller Unloading.

"RECOGNIZED AS THE BEST"



CONTROLS -
VACUUM OR AIR OPERATED
IT CAN BE INSTALLED BY A LOCAL
DEALER IN YOUR CITY OR IN YOUR OWN SHOP
PRINTS FURNISHED FOR INSTALLATION

BARTLETT TRAILER CORPORATION

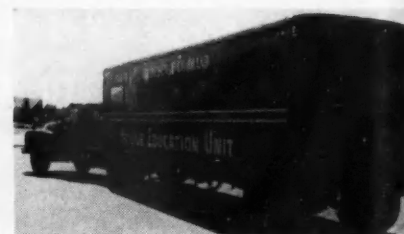
3080 ARCHER AVE. • CORNER OF ASHLAND • CHICAGO 8 • VIRGINIA 7-1160



Akers Motor Lines, Gastonia, N. C.—to 226 over-the-road drivers. Awards were made at the fleet's annual Line Drivers Safety Awards Presentation Dinner attended by more than 500 drivers and their wives.

City Express, Baltimore, Md.—to 54
(TURN TO PAGE 164, PLEASE)

Registration on Wheels



Continental Air Defense Command, USAF, has recently completed an educational mobile trailer. In a 30 x 8 x 10-ft van trailer, a mobile education adviser's office has been built. All services are made available to enroll airmen in the command for courses with United States Armed Forces Institute. There are over 200 Air Force units located in remote areas over the United States. This van trailer education office will travel to each one and service the schooling needs of the Air Force personnel stationed at these isolated sites.



tire

Roadside
Schrader
flats before
into minin

For tire
Purpose S
install Sch
Accessorie
ment with



You can gauge tire pressure—in profit!

Roadside flats can knock the top off your profit curve. But Schrader Preventive Maintenance can catch most of these flats before they happen, thus turning potential profit losses into minimum maintenance expenses.

For tire inspection work, use the Schrader 7188BH All-Purpose Service Gauge. For faster, better operating air lines, install Schrader Air Chucks, Couplers, Chuck Gauges and Accessories. And certify the accuracy of your inflating equipment with a Schrader 8106 Trutest Special Gauge.

A. SCHRADER'S SON

Division of Scovill Manufacturing Company, Incorporated
470 Vanderbilt Avenue, Brooklyn 38, N. Y.

Schrader

REG. U. S. PAT. OFF.

Schrader Products important to best tire maintenance



8106B for checking all other gauges



7188BH All-Purpose Service Gauge



2030 Chuck Gauge



7612 Heat-resisting Cap



7611 Heat-resisting Core

NEW!



9934 Locking Valve Cap prevents tampering, unauthorized tire inflation or deflation.



9934A Tool: This special unlatching tool is kept in your shop.

FIRST NAME IN TIRE VALVES

FOR ORIGINAL EQUIPMENT AND REPLACEMENT

January News Roundup

Continued from Page 162

drivers. Total record represents 15 million miles, 301 years without an accident.

Bruce Motor Freight and Bruce Transfer & Storage Co., Des Moines, Iowa—to 121 drivers. They shared in cash awards totalling \$6,138.

H. R. Ritter Trucking, Paramus,

N. J., recently presented 27 drivers with safe driving awards. Four shop mechanics also received awards.



Babaco Alarm Systems, Inc., New York City, has opened four new agen-

cies for installation and servicing of truck burglar alarms. They are in Washington, D. C., Miami, Fla., Owensboro, Ky., and Vancouver, B. C.

Goodyear Tire & Rubber Co., Akron, Ohio, has established a new sales division, relocated and realigned others. New district is the Midwest division headquarters in Des Moines, Iowa. The Northcentral division, formerly located in Chicago, will have its headquarters in Cleveland, Ohio. Division name changes include Northcentral to Eastern, Southeastern to Southern and Southcentral to Southwestern. Headquarters of these divisions remain unchanged.

Black & Decker Mfg. Co., Towson, Md., announce plans for a \$3½ million addition to its electric tool plant at Hampstead, Md. It will about double facilities there.

Bear Mfg. Co., Rock Island, Ill., will build a new plant there to double existing facilities, including about 43,000 sq ft of floor space.

White Motor Co., Cleveland, Ohio, as initiated "Operation Speed-Up" in its service sales operations. Main object is to improve service to its parts customers.

Schwitzer - Cummins Co. has changed its name to Schwitzer Corp. to eliminate confusion in identity of the company. The Cummins part of the name has had no significance for several years according to company officials.

L. O. F. Glass Fibers Co., Toledo, Ohio, has formed a new automotive sales division to develop glass fibers sales and service in this market.

Brunner Mfg. Co., Utica, N. Y., manufacturer of reefer and air compressors, celebrates its 50th anniversary in 1956.

Houdaille Industries, Inc., is the new name of Houdaille-Hershey Corp., Buffalo, N. Y.

Southern Coach Mfg. Co., Inc., Evergreen, Ala., has consolidated its service parts operations into one

(TURN TO PAGE 168, PLEASE)

COLD-WEATHER Tune-Ups Save Money!

**Start Now — with NIEHOFF
says Danny Dollar...**

• Save money by guarding now against roadside repairs, towing charges, and vehicles out of service this winter. Niehoff Warranted Ignition Parts provide one of the surest ways of keeping your fleet operating efficiently, economically—and profitably!

Quick, easy installation saves time costs, speeds job completions. Niehoff Warranted Ignition Parts are precision-made to fit all popular makes and models of cars and trucks. What's more, each part is warranted for 90 days or 4,000 miles of use as a pledge of Niehoff dependability.

So order Niehoff Warranted Ignition Parts now...keep your fleet going this winter!



C. E. NIEHOFF & CO.

4925 LAWRENCE AVENUE, CHICAGO 30, ILLINOIS

WAREHOUSES: NEW YORK 19, N.Y., 250 W. 54th Street. PHILADELPHIA, PA., 1631 Fairmont Ave. BOSTON 34, MASS., 254 Brighton Ave. BRANCHES: LOS ANGELES 15, CALIF., 1330 W. Olympic Blvd.



IT'S A BRAND-NEW CONCEPT IN TRACTOR DESIGN!

- ★ ACHIEVES outstanding new payload characteristics with the 90-inch Dimension from bumper to back of cab for maximum "L" dimension. Handles 35 ft. square-corner trailer within 45 ft. limit with 24", 30" or 36" kingpin.
- ★ HAS many outstanding mechanical advances for new economy and dependability... new driving ease.

POWERFUL NEW MUSTANG ENGINES
NEW CHASSIS DESIGN
NEW FRAME DESIGN
RUGGED NEW AXLES

White

For More Than 55 Years
The Greatest Name
In Trucks



9000



NEW Ride and Safety

It's a wonderful feel at the wheel! Great all-angle visibility, a real contour driver seat, driving ease, and sweep view instrument panel. Tom Henderson, safety director, of Mushroom Transportation Co., tries the seat while Richard W. Cutler and William W. Cutler, Jr., also of Mushroom, look on.



NEW Cast Steel Spring Brackets

High-strength and light weight cast steel frame brackets are used at critical stress points. Joseph Sheehan, Sheehan Transportation Co., Inc. likes the rugged look.



NEW Pivot-Point Suspension

Four-point pivot suspension permits radiator, fenders, and adjoining sheet metal assemblies to ride unaffected by frame twist or road shock. R.E. Woolehan, Woolehan Transportation Co. points out front pivot point.

NEW "High-Cube" Dimension

The ideal dimension concept. 90-inches from front of bumper to back of cab. Officials of O. K. Trucking Co. prove it permits as low as 24-inch kingpin setting for top payloads.

THE WHITE MOTOR COMPANY • CLEVELAND 1, OHIO



January News Roundup

Continued from Page 164

company. Coach Parts, Inc., formerly of Atlanta, Ga., has been combined with Southern Coach Parts, Inc., Birmingham, Ala.

Merit Mufflers, Toledo, Ohio, starts the year with a doubling of its plant space in Dowagiac, Mich. It took over a 131,000 sq ft plant formerly leased by Kaiser-Frazer Corp.



Arizona—The state has adopted a schedule for computing temporary registration fees of non-resident vehicles. For a 30-day period the charge is 12½ per cent of full an-

nual registration and unladen weight fees, for a 60-day period it is 22 per cent, for a 90-day period it is 30 per cent. Minimum period is 30 days, minimum fee is \$3.50.

Illinois—The state has begun rigid enforcement of its new mud guard, turn-signal and 40 mph speed limit laws for truck and trailers. Deadline for fleet operators to obtain the new contour-type mud flaps is Jan. 1, 1957.

Kentucky—State Revenue Commissioner John McKinnaird, in his annual report to the governor, recommends the 1956 legislature increase the state's GCW limit of 42,000 lb. Kentucky Motor Truck Assn. has plans to ask for a 56,800 lb GCW limit on tandem-axle trailer combinations applying to designated highways.

New York—Voters here turned down a proposed \$750 million bond issue for highway improvement. Reasons given were the possibility of expanded federal aid, no provision to protect highway funds against diversion to other uses.

South Carolina—A state legislative committee is considering the "possibility, practicability and methods" of levying taxes against out-of-state trucks.

Texas—Mexico has slapped a licensing fee on U. S. registered trucks operating there. The move is in retaliation against enforcement of a Texas law requiring out-of-state trucks to be licensed in Texas.

Wisconsin—A new law provides registration fees ranging from \$16 to \$525 for dairy products trucks weighing between 3000 and 68,000 lb GCW (H742). Another requires private and contract carriers to furnish certain information to the Public Service Commission and Highway Advisory Committee (H824). Earlier reported as defeated, the state has adopted a resolution calling for an interstate conference on regulation of truck transportation and truck highway use fees (HJR122).

END

Please Resume Reading Page 100

Auto Parts Clerk: "This is the gear-shift; there is the brake and the accelerator; and now . . . I'll show you the clutch."

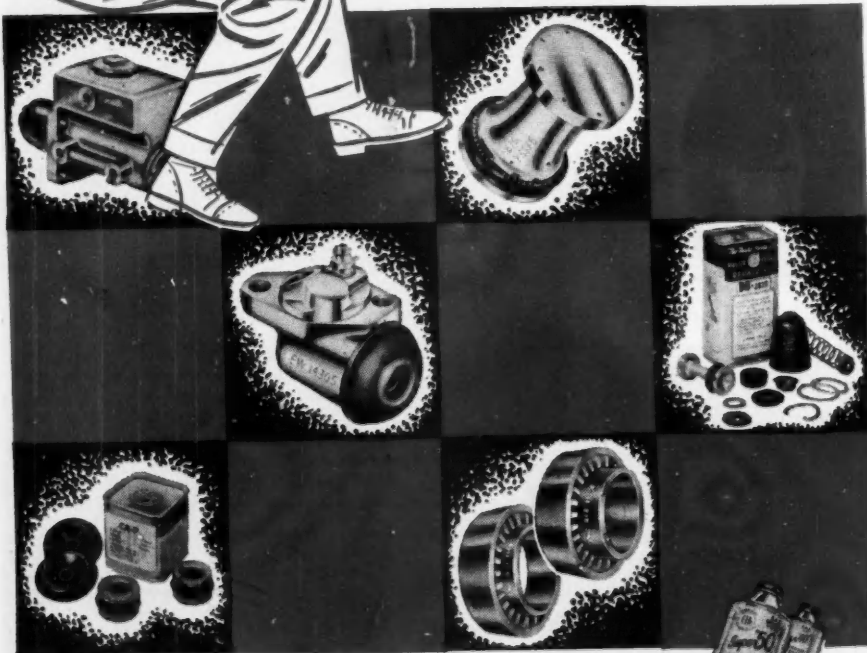
Beauteous Babe: "Let's take one thing at a time, Buster. Teach me to drive first."



**GET GOING
WITH**



**because EIS
SAVES TIME
... SAVES MONEY!**



**BETTER MADE BETTER BRAKES BETTER SERVICE
BETTER PACKED BETTER CATALOGUED
AND FOR A BETTER PROFIT.. MAKE YOUR NEXT MOVE**

Write for Catalog **EIS AUTOMOTIVE CORP., MIDDLETOWN, CONN.**



Trucking Industry

UNDER THE LOAD



NEW DAYTON 2200 DENIER SUPER CORDURA TRUCK TIRES ARE 30% STRONGER

Special, exclusive construction makes Dayton Thorobreds a full 30% stronger than the average of 4 other leading 1st line 12-ply rating tires. Because they're STRONGER, they can be made LIGHTER and COOLER RUNNING.

	50	60	70	80	90	100
DAYTON						
Brand A						
Brand B						
Brand C						
Brand D						



8 PLYS DO THE WORK OF 12-PLY RATED TIRES



DAYTON RUBBER CO., TIRE DIVISION, DAYTON 1, OHIO



Dayton Thorobred Tires

COMMERCIAL CAR JOURNAL, January, 1956

Weigh 'Em on the Go!

Continued from Page 73

taking the data from each location by means of a single recording instrument. This adds flexibility to the equipment, as well as economy in its operation.) Oregon also is presently using its new equipment for the collection of research data.

In Minnesota

Installations of new equipment planned for Minnesota during the summer of 1955 deal primarily with enforcement rather than research. It is the Minnesota Highway Department's plan to install the "overload detector" in several key highways surrounding Minneapolis and St. Paul, and to automatically direct all overloaded trucks into a nearby static weighing station. At the static weighing station, the actual overload amount will be determined for penalty purposes.

A neon sign will be located overhead about 700 ft beyond the detector platform which is installed right in the highway lane and the normal reading of the sign will be . . . "Do Not Stop For Weighing." As long as the axle traversing the platform is within the legal limits the sign will read as above. As soon as an excessively loaded axle passes over the electronic scale platform, a relay will trip and the sign will then

read . . . "Stop For Weighing."

Just beyond the sign a bypass will be located leading to a static scale platform. This type of system will permit all the legally loaded vehicles to proceed uninterrupted along the highway without the necessity of stopping for the weighing operation. Time will be saved by the truckers, the state weighing stations will require fewer personnel, and fewer weighings will permit more care to individual weighings.

Enforcement Weights

Accuracy on the new electronic motion weighing equipment has been well within the original 10 per cent tolerance established by the Bureau of Public Roads as the target for the development. While motion weighing has been established, it will never replace stationary weighing insofar as the courts are concerned since many external influences are bound to affect the weight figure.

Gusts of wind, side loads due to slight turning, and vibrations due to an uneven road surface all tend to influence the accuracy of the weight recording. However, testing under all sorts of conditions imposed by the Bureau of Public Roads, and the weather, seems to establish that single axles may be expected to be within 4 per cent

accuracy and tandem axles within 3½ per cent accuracy. Gross weights however are normally within 1 per cent.

Toll Road Uses

The new equipment has an excellent application on toll turnpikes and bridges. Usual procedure is to base the toll for trucks on the number of axles, whereas the truck weight might be a more equitable method of determining the proper toll rate. Weighing each truck has not been practical in the past due to the time consuming process of the stationary weighing procedure and the expense of large platform scale installations.

A modification of the new electronic motion weighing equipment will provide for the summation of axle weights as the truck enters the toll lane and will automatically place the truck in a weight classification for a predetermined toll rate. Such new automatic weighing systems are programmed for early installation on the Pennsylvania and Ohio Turnpikes.

Loading Errors

North Carolina reports approximately 75 loading violations out of 1000 trucks at the time a new weighing station is initially put into operation. Once it becomes known that the weighing station is in operation on a 24-hour basis, violations drop to about 4 per 1000 trucks. On a relatively busy highway, handling say 60,000 trucks per month, this represents a drop in overweight vehicles from 4500 to 240 per month.

Even so, North Carolina strangely enough reports that while the road violations are radically reduced by a 24-hour weighing station operation, the actual total net tonnage carried for a given period of time over the highway does not decrease. This indicates that many of the violations are due to improper loading and that a greater effort is made by the truckmen to utilize the full legal load limit as much as possible.

END

Please Resume Reading Page 74

COMMERCIAL CAR JOURNAL, January, 1956



The motion weighing platform (between front and rear axles of the truck above) is three feet long, extends the full width of single traffic lane

TRIC

Stop Oil Filter
on the top b
leaktight seal.

Radiator and
to permit easy
get-at heater

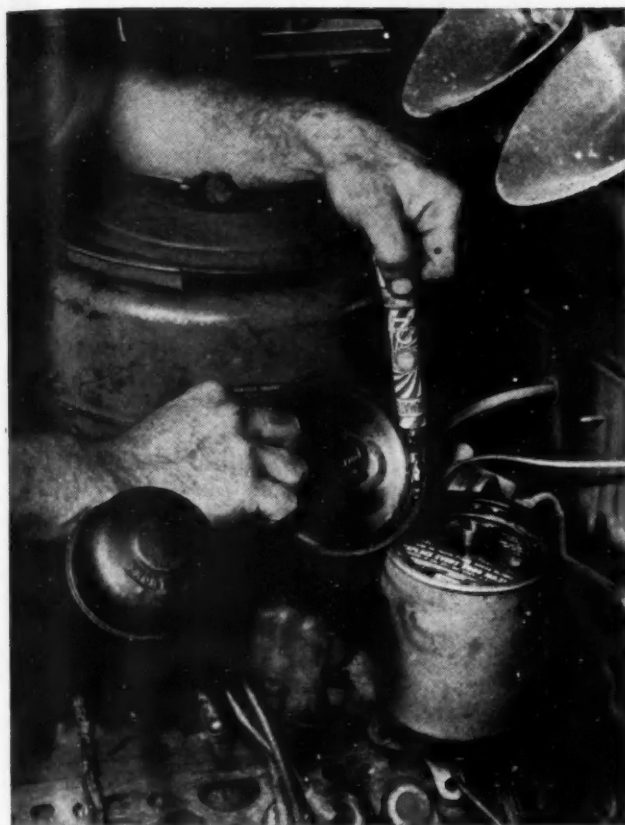
PER

Broo

More than 3

COMMERCIAL C

TRICKS OF THE TRADE *from* PERMATEX



Stop Oil Filter Leaks. A coating of Form-A-Gasket No. 2 on the top bowl gasket before seating gives you a sure, leaktight seal.



Repair Cracked Batteries. Simply wash off the acid with water and apply Form-A-Gasket No. 1. Makes a strong, permanent repair job.



Radiator and Heater Hose. Brush Form-A-Gasket No. 3 on the hose to permit easy assembly and make a tighter seal. Perfect on all hard-to-get-at heater connections to guard against leaks.

PERMATEX COMPANY, INC.

Brooklyn 35, N.Y. • Kansas City 15, Kans.

More than 50 Chemical Products for Better Automotive Maintenance

COMMERCIAL CAR JOURNAL, January, 1956

FORM-A-GASKET[®] Universal Sealing Compounds LEAKPROOF—PRESSURE-TIGHT

Check tips like these for new ways you can use Form-A-Gasket, best sealant going for leakproof, pressure-tight assemblies. Form-A-Gasket resists gasoline, water, hot or cold oil—many other liquids and gases. And it's specially made to withstand the pressures of high-compression engines.

Every Shop Needs All 3 Types



No. 1. Sets quickly
—dries hard



No. 2. Sets slowly
—remains pliable



No. 3. Brushable
liquid—remains tacky

Hundreds of uses around the house, too

Don't Overpay Your Taxes

WHETHER federal income tax rates are cut or not, you may be able to cut your own tax bill by careful application of tax provisions. This, in summary, is what the American Institute of Accountants (national professional organization of certified public accountants) has to say about the approaching March 15 deadline.

To do this you need to know the tax effect of various choices. Your choice of a method of handling a particular transaction can raise or lower your taxes. Sometimes you can save money by a legitimate shift of taxable income or deductions from year to another. You are also allowed choices in your treatment of certain items in your tax return, such as depreciation and research costs.

Many fleets could reduce their tax burden if they were aware of all the tax considerations affecting a variety

of transactions. Best way to keep alert to tax saving opportunities—short of being a tax expert yourself—is frequent consultation with a properly qualified advisor. If you retain a certified public accountant or a firm of CPA's, there should be tax consultations not just once a year when the filing date approaches, but throughout the year as decisions are made which will affect the tax, i.e. purchases of new shop equipment, vehicles, depreciation, repairs and improvements, other similar transactions.

Depreciation Method

Certain tax-saving steps are still possible at tax-filing time. One of them is choice of depreciation method. First step is to determine the estimated useful life of any asset acquired during the tax year.

Simplest method is straight-line de-

preciation. Just divide the cost (less what you expect to sell it or trade it in for when it is replaced) by the number of years of estimated useful life, and this is the amount to be deducted each year. In arriving at the original cost, don't forget to include freight and installation charges in addition to the price paid for the equipment.

"Fast" Depreciation

The law now permits other methods of depreciation for new assets having a useful life of three years or more. One of them is known as the declining method. In the first year the depreciation rate is twice what it would be under the straight-line method. The next year the same rate is applied to the amount remaining to be depreciated. This process is repeated each year. The result is that a greater proportion of the cost is depreciated during the early years of the life of the asset.

Another new method, known as "sum of the years' digits," has a similar effect. You should figure depreciation on a new asset in all possible ways so that you can decide which is best for you and make the proper choice.

These methods of rapid depreciation may be helpful to a fleet which is currently making large outlays for new equipment, but the depreciation left for the later years of the asset's life will be less than under the straight-line method. Best method depends upon the circumstances of the individual fleet, and is also affected by such imponderables as estimates of future earnings and tax rates during the life of the asset. In general, methods of rapid depreciation permit a larger depreciation deduction in the earlier years of the life of the asset, less deduction as the asset grows older.

Research and Development

Another question is whether to treat research and development costs as immediately deductible expenses or to amortize them over a period of years. The immediate deduction is certainly a "bird in the hand" and may be very attractive to a fleet which needs this tax benefit to help finance the undertaking.

The fleet which can afford to spread the cost over the estimated useful life (or at least sixty months if the useful life cannot be determined) may find it best to do so. This is especially likely to be advantageous for fleets whose revenue is expected to increase.



Detachable Axle Boosts Payload

HERB NIMTZ, Three Oaks, Mich., announces production of a unit to convert single-axle tractors to tandem-axle units. It can be attached permanently or temporarily. It is easy to attach and detach.

To adjust axle-spacing, it can be moved from a ½-in. to 13 or 15 in. depending on the model. Suspension is coil springs in telescopic housings with torque rods. Unit weighs about 3000 lb with 10:00 x 20 tires on spoke-type wheels and air brakes.

Kingpin adjustment is accomplished

through moving shims from one side of the pin to the other. Shims are made of ½-in. steel plate, range in size from ½ to 6 in. Shims and pin are held in place by a bolted cover.

When not in use, the conversion unit rests on its wheels and two built-in stiff legs. The maker says there is no bind on highway curves nor can the unit interfere with backing or jack-knife.

For further details on this conversion unit, circle P 38 on the postcard on page 84.



You Get **INSTANT** Protection...
 You Get **AUTOMATIC** Protection...
 Plus Shorter Stopping Distance...
 WITH **MIDLAND** Break-Away
SAFETY CONTROLS!

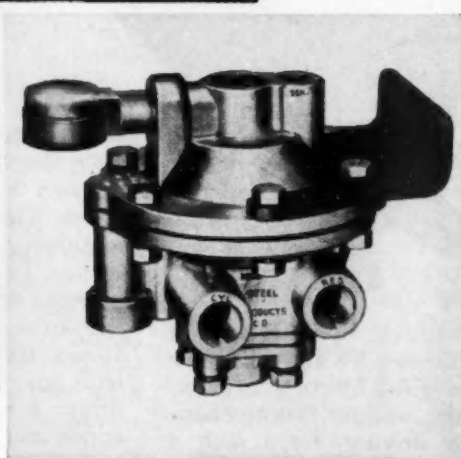
It's Good Business—And Good Public Relations, Too—to Equip Your Tractor-Trailer Units With MIDLAND Safety Controls—And Your Drivers Will Be The First To Thank You!

If you operate tractor-trailers equipped with air brakes, break-away safety controls are of course required by the ICC on all tractors built since June 30, 1953, but for maximum protection specify *Midland* Break-Away Safety Controls.

Midland's break-away valve is *fully-automatic*! Another major benefit—you get shorter service stops when you use Midland's break-away valve.

Midland's break-away safety system involves its *fully-automatic* Break-Away Valve, with Check Valve. It is supplemented by an audible signal which notifies the driver of low air pressure. This is accomplished by the use of an *automatic* Low Pressure Switch, and a dependable warning Buzzer—all thoroughly proved in service.

Because Midland's break-away safety system is *fully-automatic*, the driver has only to apply service brakes in the usual manner. *There are no additional controls to operate*—and brake function is fully restored after the vehicles have been re-connected.



On Midland-equipped units, if trailer should break away from tractor, warning Buzzer sounds . . . instant-acting Reservoir Check Valve *automatically* seals air supply, providing tractor with sufficient reserve . . . Break-Away Valve (illustrated) permits tractor brakes to be applied to bring tractor to safe stop . . . trailer braking system *automatically* applies emergency feature to stop trailer!

Midland break-away safety controls are available in complete kits and are easily installed. For information and prices, see your local Midland Distributor.

THE MIDLAND STEEL PRODUCTS CO.

3641 E. Milwaukee Avenue • Detroit 11, Michigan

Export Department: 38 Pearl Street, New York, N.Y.



*Those Who Know
 Power Brakes Choose
 MIDLAND!*

Winner in National Truck Rodeo tells why he drove a **CHEVROLET!**



Covert Flucks, one of the
National Truck Rodeo
first-place winners.

"I'D SAY THAT Chevrolet is the easiest handling truck it's been my experience to drive. Exceptionally easy to steer, rides well, easy to maneuver in traffic and back up to loading docks, and it really stops in a hurry when you put your foot down on the brake pedal. Those are the big reasons why I selected a Chevrolet to drive in the National Truck Rodeo.

"Of course there are a lot of other reasons why I like Chevrolets. I've been driving Task-Force models ever since they came out, so I can pretty quickly nail down the features that stand out as especially good ones.

"Right away I think of easy handling again. Sometimes you think you've got Power Steering—the wheel's that easy to turn. Next I like

Chevrolet engines. I've driven both the 6 and the new V8 and I'll swear by them for quick starting, even on cold mornings, and for fast acceleration in city driving. Even with a heavy rig you get away from the light right away. Both are easy on the gas, too.

"Inside, Chevrolet has a lot of good features. The wide curved windshield for one. And a new kind of ventilation, for another. You get a steady flow of outside air even in bad weather, and without leaks. I like

the step, too. You don't see it till you open the door, which means it stays dry and doesn't get caked with mud or ice. That's a mighty good safety feature. As far as appearance is concerned, I suppose that's a matter of personal taste; but I'd enter the rig I drive in any truck beauty contest. It's a big tough-looking job, but with smooth, good-looking lines. A driver takes a lot of pride in the appearance of the truck he drives; and I'll say this—I've never been prouder."

★ ★ ★

Don't these sound like good reasons for putting a Chevrolet truck to work on *your* job? Stop in and talk it over with your Chevrolet dealer. . . . Chevrolet Division of General Motors, Detroit 2, Michigan.

than 2½ l
ter locking
make up a
truck or
bought si
Reefer flo
and 6¼ i
hand and l
make up a
truck or t
be bought
bination.
of the ext

P21. Tw

General
announces
allow the
ferent rad
time and
previous
job. Acco
fleets usin
tion find it
ing super
sides of a

P22. Li

Hercules
Ohio, ann
Gate" pov
and 3000-l
signed for
larger tru
platform a
Model Nos
gates offer
raising an
ing and
engineered
any truck
alterations

P23. W

Trico
N. Y., an
ordinated"
self-startin
mixture is
and the v
matically.
cleaned, th
keep goin
liquid. Af
blades are
return to
tion. Thi
quence alle

New Products

Continued from Page 86

than 2½ lb per ft, and a ¼-in. center locking strip. These sections will make up a floor for almost any width truck or trailer body. They can be bought singly or in combination. Reefer floor sections are made in 9 and 6¾ in. floor widths plus right hand and left hand flashings, and will make up a floor for almost any width truck or trailer body. They can also be bought as a unit, singly or in combination. The locking device is a part of the extruded form.

P21. Two Frequency Radio

General Electric, Syracuse, N. Y., announces a new two-way radio to allow the driver to monitor two different radio frequencies at the same time and costs 35 per cent less than previous equipment to do the same job. According to General Electric, fleets using a dual frequency operation find it advantageous to have roving supervisors who can hear both sides of all radio messages.

P22. Lift Gate

Hercules Steel Products Co., Galion, Ohio, announces two new "Load-N-Gate" power-lift tail-gates of 2000 and 3000-lb capacity respectively, designed for mounting on 1½ ton and larger trucks and trailers with stake, platform and van bodies. Designated Model Nos. H-20 and H-30, the new gates offer single lever control of raising and lowering, hydraulic closing and opening plus construction engineered to permit installation on any truck or trailer without frame alterations.

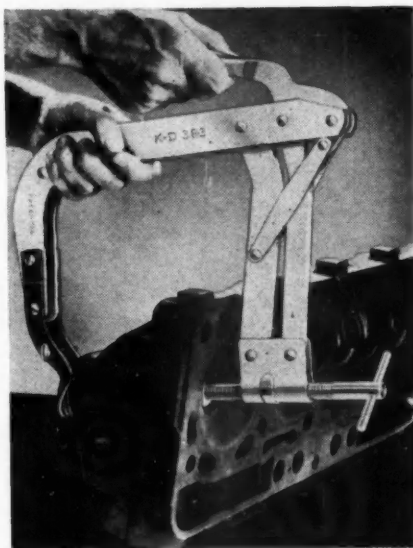
P23. Windshield Wiper

Trico Products Corp., Buffalo, N. Y., announces its new "CO Coordinated" windshield washer with self-starting wipers. Water-solvent mixture is jetted on the windshield and the wipers are activated automatically. After the surface is cleaned, the fluid stops but the blades keep going to remove the surplus liquid. After the glass is dry, the blades are automatically stopped and return to their normal parked position. This complete automatic sequence allows the driver to watch the

road at all times, and he need remove one hand from the wheel only long enough to press the button. Blades will not operate if the water-solvent level is too low to provide adequate cleaning. This prevents smearing dirt across the dry glass. The wiper blades can be operated independently of the washer during rain or snow conditions.

P24. Valve Spring Tool

K-D Mfg. Co., Lancaster, Pa., announces a new valve spring compressor for faster and easier servicing of V-8 valve-in-head engines. The tool is constructed to handle double valve springs. After the threaded



plunger bar is set for the first spring, depth adjustment is automatic for the remaining springs. Tool can also be used on L-head engines if manifolds are removed.

P25. Wire Tread Tire

Goodyear Tire & Rubber Co., Akron, Ohio, announces a new truck tire of wire tread construction designed primarily for winter use. The new tire features a multitude of tiny steel claws said to bite into ice, hard-packed snow and provide maximum grip on all slick highways.

P26. Power Brake

Products Division, Bendix Aviation Corp., South Bend, Ind., announces production of a new power brake for 1½-ton trucks. The new brake rounds out a line that already included models designed for half-, three-quarter- and one-ton trucks, and a

(TURN TO NEXT PAGE, PLEASE)



**IN SOME CASES
THIS LUBRICANT
TRIPLED THE
LIFE OF
WEARING PARTS**

—says EDWARDS MOTOR TRANSIT CO.
WILLIAMSPORT, PA.

"Since using LUBRIPLATE 630-AA some of our coaches have been operated in excess of 300,000 miles. None have required the rebushing of a single front end bearing. We are able to extend our lubrication schedule to every 4000 miles compared to 2000 miles with other lubricants. In some cases LUBRIPLATE has tripled the normal life of wearing parts."

**REGARDLESS OF THE SIZE AND
TYPE OF YOUR MACHINERY,
LUBRIPLATE LUBRICANTS
WILL IMPROVE ITS OPERATION
AND REDUCE MAINTENANCE**

LUBRIPLATE LUBRICATION



**MAKES CARS
AND TRUCKS
RUN BETTER
AND LAST
LONGER**

LUBRIPLATE H.D.S.
MOTOR OIL... THE OIL
THAT NEEDS NO
ADDITIVES

For nearest LUBRIPLATE distributor see Classified Telephone Directory. Send for free "LUBRIPLATE DATA BOOK" ... a valuable treatise on lubrication. Write LUBRIPLATE DIVISION, Fiske Brothers Refining Co., Newark 5, N. J. or Toledo 5, Ohio.



AT LAST A NEW LIGHT



NOW - FIRST TIME

STORAGE BATTERY OPERATED

Fluorescent Lights ©T.C.

IN YOUR TRUCKS

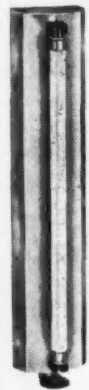
Brilliant

INTERIOR LIGHTING—for Display, Delivery & Service Trucks

TERADO ROV-A-LITE ©T.C.

Extra Easy on battery

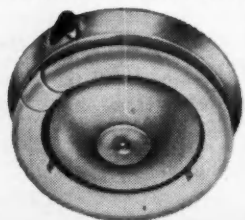
No battery worries. Takes only 1/3 as much current as incandescents. More brilliance. ROV-A-LITE operates from truck battery—anywhere you drive, or from regular A.C. Line. Saves time. Helps prevent mistakes in delivery.



Side Wall Fixture

Heavy chrome plated. 8 watts. Size 3"x10"x2 1/2".

List, either Model—\$24.95
Model M6-8—for 6-volt battery. Uses only 2 1/2 amperes.
Model M12-8—for 12-volt battery. Uses only 1 1/2 amperes.
Both Models available with A.C. receptacle for Electric Shaver.
List, either Model—\$27.95
Model SM6-8—for 6-volt battery.
Model SM12-8—for 12-volt battery.



Ceiling Fixture

Heavy chrome plated. 22 watts. Diameter 10", thickness 2 1/4".

List, either Model—\$34.95
Model M6-22 for 6-volt battery. Uses only 4 1/2 amperes.
Model M12-22 for 12-volt battery. Uses only 3 amperes.

Write for full details

TERADO Company

Designers and Mfrs. of Electronic Equipment Since 1927

1064 Raymond Ave., St. Paul 14, Minn.

IN CANADA WRITE: Atlas Radio Corp., Ltd., 560 King St. West, Toronto 28, Ont.

EXPORT SALES DIVISION: Scheel International, Inc., 4237 N. Lincoln Ave., Chicago 18, Ill., U. S. A.
Cable Address—Harsheel

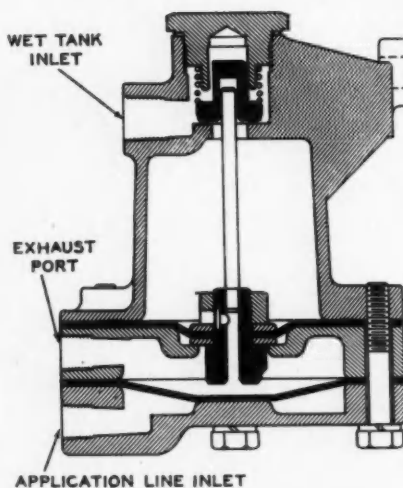
New Products

Continued from Page 197

special unit for GMC, Chevrolet, Dodge, International Harvester and Ford trucks. They are designed to be mounted "under the hood" for ease of installation and servicing.

P27. Ejection Valve

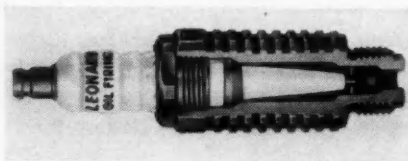
Automotive Division, Wagner Electric Corp., St. Louis, Mo., announces a new moisture ejection valve which automatically keeps air reservoirs



clean and dry. Operating in the 15 to 25 psi air pressure range, normal brake applications operate the valve without noticeable drop in tank gage pressure. Valve is designed to make it impossible for working pressures to balance the valve in open position and "dump" reservoir pressure. No heating element is necessary as the valve will not freeze in open (exhaust) position.

P28. Spark Plug

Leonard Spark Plug Co., Newark, N. J., announces an oil firing spark plug. The twin electrode oil firing



spark plug is designed for vehicles with any type oil condition. It has permanently gapped twin electrodes, air cooling fins.

P29. Oil Filters

Atlas Mfg. Co., Indianapolis, Ind., announces a new line of oil filters,

the A.M.C. line. Manufactured in 17 different models, the oil filters are filled with Atlas' microscopic filter agent, Detergi-Tex. The interwoven, non-channeling fiber of Detergi-Tex is designed to minutely screen all oil.

P30. Steam Gun

Oakite Products, Inc., New York City, announces its "Hurricane" gun designed for steam cleaning efficiency, cool handling and easy operation. It

(TURN TO PAGE 200, PLEASE)

KINNEAR STEEL Rolling Doors

They save space; open straight upward. Surrounding space is always fully usable. All metal protection against fire, wind, theft. Any size, for trucks or buildings. Write.



KINNEAR
ROLLING DOORS
Saving Ways in Doorways

The KINNEAR Manufacturing Co.
2100-20 Fields Ave.
Columbus 16, Ohio



you can always depend on



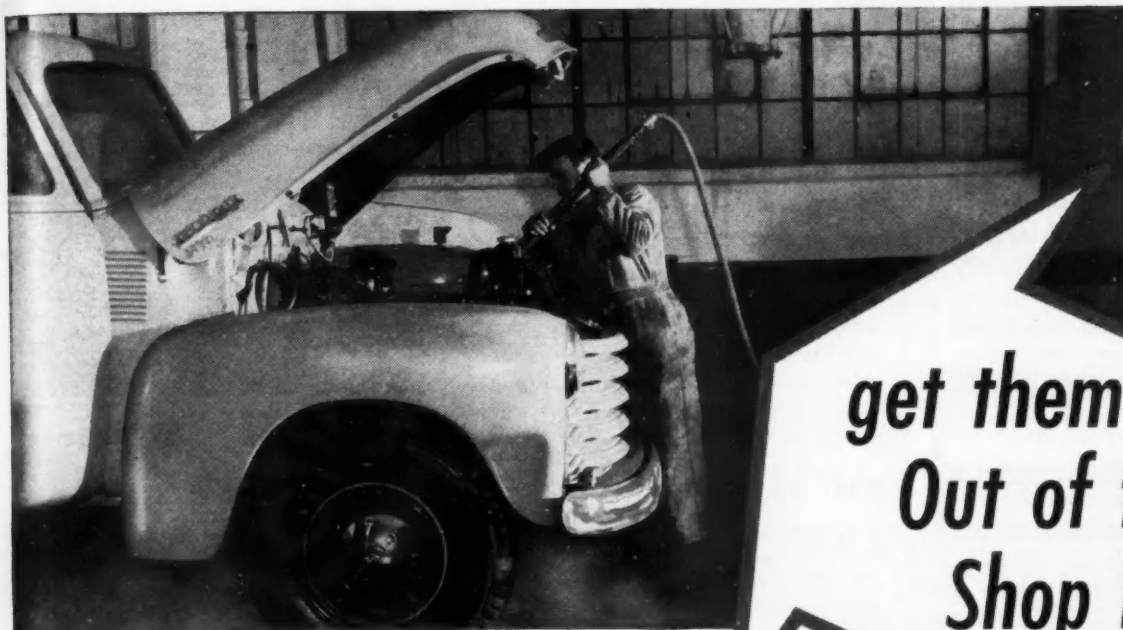
WOLF'S HEAD
HEAVY DUTY
MOTOR OIL
100% PURE PENNSYLVANIA

Exceeds

EVERY REQUIREMENT
FOR HEAVY DUTY OIL



There are now
120
Water Pumps
in our line
Wohler
Corporation
LANSING 5 MICHIGAN



get them
Out of the
Shop **FAST!**

KEEP THEM ROLLING...AND EARNING

WITH NEW SERIES "1800"

HYPRESSURE

Jenny

STEAM CLEANER

Hypressure JENNY steam cleaning *before* servicing or repairs, cuts vehicle "down-time" almost in half by removing the grease, oil, muck and road dirt that slows mechanics down and runs up costs. That means double savings; less shop labor expense; shorter "lay-ups" and many more profitable road miles.

JENNY cleans *fast*, too! For example, one man with Hypressure JENNY can sanitize and deodorize a refrigerator truck body in less than an hour, a full 10 hours job by any other cleaning method. And there are scores of other jobs JENNY will do faster and better to keep your fleet rolling and earning.

Powerful, portable, Series "1800" Hypressure JENNY cleans anything... anywhere... starts instantly... is economical and easy to operate.

For complete details on how Hypressure JENNY can help *you* "get them out of the shop fast" and keep them rolling...



**NOTE THESE
EXCLUSIVE FEATURES**

- ▶ 180 Gallons An Hour Steam Cleaning Capacity
- ▶ 480 Gallons An Hour Flushing and Rinsing Capacity (optional)
- ▶ Automatic Electric Ignition
- ▶ Instant Starting
- ▶ 2 Cleaning Gun Operation
- ▶ Nozzle Control
- ▶ Contamination-proof Water System
- ▶ Positive Displacement Pump
- ▶ Asbesto-Steel Vapor Hose
- plus many others

MAIL THE COUPON TODAY! No obligation.

HYPRESSURE JENNY DIVISION

HOMESTEAD

VALVE MANUFACTURING COMPANY

"Serving Since 1892"

P.O. BOX 90, CORAOPOLIS, PA.

Please send me complete information on Hypressure JENNY Steam Cleaner.

Name _____ Title _____

Company _____

Address _____

City _____ State _____

TOPS FOR TIRES
JOB-DESIGNED
KEN-TOOLS
HAND-FORGED FROM
CHROME NICKEL ALLOY STEEL
FOR EXTRA STRENGTH AND EXTRA LONG LIFE



T-1X 18" Straight Spoon
T-2X 18" Curved Spoon
T-21R 18" Drop Center Tool—eliminates slipping and tube pinching
T-17 New LifeGuard Tube Remover
T-5B 17" All-Purpose Tire Tool—famous favorite for all-around work
T-66 Universal Hub Cap Remover for all cars—prevents marring—keeps cap from dropping—satisfaction guaranteed
T-10 Bead Spreader for casing inspection and repair

SEE YOUR JOBBER on the complete line of Job-Designed Ken-Tools. Forged by the largest exclusive manufacturer of top-quality Tire-changing Tools and Equipment. THE KEN-TOOL MFG. CO., AKRON 5, OHIO.



"BOS" HYDRAULIC TRUCK TIRE DEMOUNTER



\$89.50
 Higher West of Rockies

removes, safely and easily, frozen or stuck casings from rim in minutes. Features Hein-Werner Hydraulic unit. Handles all size truck tires, wheels and rims.

MAIL ORDERS OR REQUESTS FOR FURTHER DETAILS TO
JACK P. HENNESSY SALES CO.
 12 DEPOT SQUARE • ENGLISHTOWN, N.J.

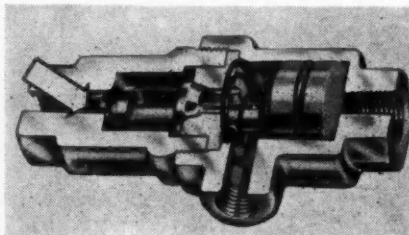
New Products

Continued from Page 198

uses a tube within a tube—steam passing through the insulated interior tube, solution through the exterior. The steam loses none of its heat, but the cleaning solution reduces the external temperature of the gun. Solution is automatically drawn into the nozzle by the partial vacuum created by the steam passing through. Sealed rotary joint makes it possible to rotate the nozzle.

P31. Ejector Valve

George Mfg. Co., Philadelphia, is featuring in its Model No. 4000 series air line drain valve ejector a new nylon spindle said to wear five times



longer than a brass spindle, reduce damage from rust scales. The "George" ejector, with the nylon spindle, has been successfully and economically used to discharge water, oil, carbon, and sludge from air tanks of trucks, tractors, buses, garage equipment, and gas station equipment in the automotive field.

P32. Diesel Mufflers

Harflo Products, Ardsley, Pa., announces a new line of heavy-duty, stack-type mufflers for diesel trucks. The new mufflers offer a minimum of back pressure combined with a tone control lower than those specified by the SAE. One of the four new models will fit three out of five present-day diesel trucks without adaptors of any sort. Two sizes of extensions and two sizes of reducers handle all known diesel installations.

P33. Loading Ramp

Rowe Methods, Inc., Cleveland, Ohio, has developed a hydraulically-operated, 20,000-lb capacity, adjustable loading ramp, which can be installed recessed, partially recessed or in front of the dock as an actual ramp. The unit, designated as Model No. 4 M.F., provides instant raising or lowering from a push button.

End

Please Resume Reading Page 88

BOWERS BATTERIES

Always Better

BOWERS BATTERY & SPARK PLUG CO., READING, PA.

FRINK SNO-PLOWS

Both "V" TYPE and ONE WAY BLADE TYPE
 hand or power hydraulic control
 FOR ALL MOTOR TRUCKS
 FROM 1½ to 10 TONS

FRINK SNO-PLOWS, INC., CLAYTON, 1000 Isl., N.Y.

FRINK SNO-PLOWS OF CAN. Ltd., TORONTO, ONT.

RECONDITIONING OF YOUR

GMC 71 DIESEL INJECTORS

Production Line Price & Quality Control

Some Dealer Areas Open

You Get Quickest Service From Your Nearby HANCOCK Dealer. Write Us For His Name. Service Also Available on Plungers & Bushings and Caterpillar Pumps & Injectors.

Write for Catalog

HANCOCK

DIESEL SERVICE CO.

325 Walnut St. Findlay, Ohio

**MOTOR TRUCKS
 CRANE CARRIERS
 CUSTOM BUILT CHASSIS
 GENERATOR SETS**

DUPLEX

TRUCK COMPANY
 LANSING, MICHIGAN

W. G. B. makes OIL FILTERS

from
 60 to 750 Cu. In.
 Capacity

...and Cartridges for
 all makes of Filters.

Write for Details

W. G. B. OIL CLARIFIER, INC.

First By Test Since 1931 KINGSTON, N.Y.